

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 309682

Gomponent Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

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

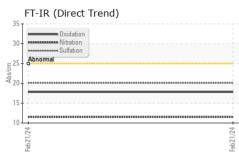
There is no indication of any contamination in the oil.

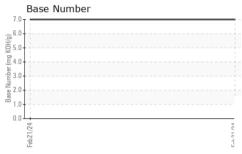
Fluid Condition

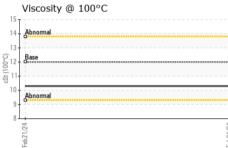
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

x13)						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110226		
Sample Date		Client Info		21 Feb 2024		
Machine Age	mls	Client Info		91078		
Oil Age	mls	Client Info		20000		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	_S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	29		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	5		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	3		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	13		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	77		
Manganese	ppm	ASTM D5185m	0	1		
Magnesium	ppm	ASTM D5185m	950	843		
Calcium	ppm	ASTM D5185m	1050	1190		
Phosphorus	ppm	ASTM D5185m	995	1019		
Zinc	ppm	ASTM D5185m	1180	1215		
Sulfur	ppm	ASTM D5185m	2600	3551		
CONTAMINAN	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4		
Sodium	ppm	ASTM D5185m		4		
Potassium	ppm	ASTM D5185m	>20	3		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.7		
Nitration	Abs/cm	*ASTM D7624	>20	11.5		
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1		
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8		
Base Number (BN)	mg KOH/g	ASTM D2896		7.0		









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VISUAL		method	limit/base		current	history1	history2
White Metal	scalar	*Visual	NONE		NONE		
Yellow Metal	scalar	*Visual	NONE		NONE		
Precipitate	scalar	*Visual	NONE		NONE		
Silt	scalar	*Visual	NONE		NONE		
Debris	scalar	*Visual	NONE		NONE		
Sand/Dirt	scalar	*Visual	NONE		NONE		
Appearance	scalar	*Visual	NORML		NORML		
	scalar		NORML		NORML		
	scalar		>0.2				
Free Water	scalar	*Visual			NEG		
FLUID PROPER	RTIES	method	limit/base		current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00		10.3		
GRAPHS							
Iron (ppm)			10		Lead (ppm)		
Severe					Severe		
					T 		
			L		Abnormal		
50 -							
0				0			
21/24			021/24	1010	21/24		Put of
—			Fet				10
Aluminum (ppm)					Chromium (pp	m)	
Severe					Severe		
Abnormal			dd,	20-	Abnormal		
10-				10-			
0				0			
1/24			1/24	1010	1/24		Latod M
—			Feb				Lo.
400							
Abitottival				_ '	Gevele		
틆 200 -			dd		Abnormal		
100 -				20-			
0				0			
21/24			21/24	1010	21/24		Eeh 21 /24
_			Feb	H	a-		
Viscosity @ 100°C					Base Number		
			(B/H)	Ī			
			OX Bu	6.0			
0012 Base			u) aqu	1.0			
310 - Abnormal			N 2	2.0			
8			0	0.0			
Feb21/24			Feb21/24	1010	Feb 2 1/24		c.h.21.124
			Feb	l	60		1
	Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water FLUID PROPE Visc @ 100°C GRAPHS Iron (ppm) Control (ppm) Abnormal Copper (ppm) Copper (pp	Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Free Water scalar Free Water scalar Free Water cst GRAPHS Iron (ppm) Abnormal Abnormal Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm)	Precipitate scalar *Visual Silt scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual Codor c St ASTM D445 GRAPHS Iron (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm)	Precipitate scalar *Visual NONE Silt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual >0.2 Free Water scalar *Visual Visual Vi	Precipitate scalar *Visual NONE Sitt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual >0.2 Free Water scalar *Visual >0.2 Free Water scalar *Visual FLUID PROPERTIES method imit/base Visc @ 100°C cSt ASTM D445 12.00 GRAPHS Iron (ppm) Aluminum (ppm) Some for the state of th	Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Cdor scalar *Visual NORML NORML Emulsified Water scalar *Visual NORML NORML Tree Water scalar *Visual NORML NORML Visc @ 100°C cSt ASTM D445 12:00 10.3 GRAPHS Tron (ppm) Aluminum (ppm) Gropper (ppm) Googen Copper (ppm) Copper (ppm) Viscosity @ 100°C Viscosity @ 100°C Silicon (ppm) Copper (ppm) Silicon (ppm) Copper (ppm) Silicon (ppm) Silicon (ppm) Copper (ppm) Silicon (ppm) S	Precipitate scalar *Visual NONE NONE Sit scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual NORML NORML Eree Water scalar *Visual NORML NORML Free Water scalar *Visual NORML NORML Eree Water scalar *Visual NORML NORML Eree Water scalar *Visual NORML NORML Eree Water scalar *Visual NORML NORML Car Precedular *Visual NORML NORML Eree Water scalar *Visual NORML Eree Water scalar *Visual NORML Eree Water scalar *Visual NORML Eree Water scalar *Visual ** FLUID PROPERTIES retroit for the scalar ** Iron (ppm) Eree Water scalar ** Viscosity @ 100°C Uscosity @ 100°C Eree **

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