

(P1184786) Preferred Service-Tractor Machine Id [Preferred Service-Tractor] 192A32032B Component

Diesel Engine

PETRO CANADA DURON UHP 5W30 (36 QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

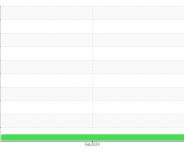
Contamination

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. No other contaminants were detected in the oil.

Fluid Condition

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

TS)				Feb2024				
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		PCA0116699				
Sample Date		Client Info		11 Feb 2024				
Machine Age	mls	Client Info		46480				
Oil Age	mls	Client Info		30291				
Oil Changed		Client Info		N/A				
Sample Status				NORMAL				
CONTAMINAT	ION	method	limit/base	current	history1	history2		
Fuel		WC Method	>6.0	<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	70				
Chromium	ppm	ASTM D5185m	>20	1				
Nickel	ppm	ASTM D5185m	>2	1				
Titanium	ppm	ASTM D5185m		<1				
Silver	ppm	ASTM D5185m	>2	<1				
Aluminum	ppm	ASTM D5185m	>25	17				
Lead	ppm	ASTM D5185m	>40	1				
Copper	ppm	ASTM D5185m	>330	105				
Tin	ppm	ASTM D5185m	>15	6				
Vanadium	ppm	ASTM D5185m	210	0				
Cadmium	ppm	ASTM D5185m		0				
ADDITIVES		method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	14				
Barium	ppm	ASTM D5185m	0	0				
Molybdenum	ppm	ASTM D5185m	64	63				
Manganese	ppm	ASTM D5185m		1				
Magnesium	ppm	ASTM D5185m	1160	1138				
Calcium	ppm	ASTM D5185m	820	873				
Phosphorus	ppm	ASTM D5185m	1160	980				
Zinc	ppm	ASTM D5185m	1260	1277				
Sulfur	ppm	ASTM D5185m	3000	2872				
CONTAMINAN	ITS	method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	12				
Sodium	ppm	ASTM D5185m		5				
Potassium	ppm	ASTM D5185m	>20	57				
INFRA-RED		method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	1				
Nitration	Abs/cm	*ASTM D7624	>20	11.9				
Sulfation	Abs/.1mm	*ASTM D7024	>30	25.6				
FLUID DEGRA			limit/base		history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.6				
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	5.5				



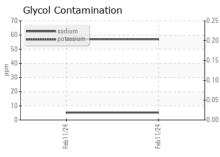
Sample Rating Trend

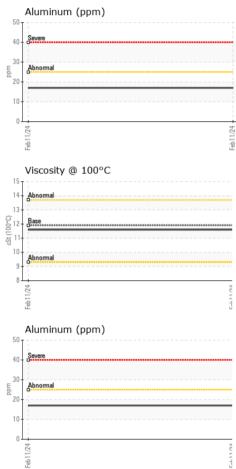


NORMAL



OIL ANALYSIS REPORT





ion	- 0.25	VISUAL		method	limit/base	current	history1	history2
	-0.20	White Metal	scalar	*Visual	NONE	NONE		
		Yellow Metal	scalar	*Visual	NONE	NONE		
	-0.15 e	Precipitate	scalar	*Visual	NONE	NONE		
	-0.10 8	Silt	scalar	*Visual	NONE	NONE		
	-0.05	Debris	scalar	*Visual	NONE	NONE		
	0.00	Sand/Dirt	scalar	*Visual	NONE	NONE		
Feb11/24		Appearance	scalar	*Visual	NORML	NORML		
Feb 1		Odor	scalar	*Visual	NORML	NORML		
		Emulsified Water	scalar	*Visual	>0.2	NEG		
		Free Water	scalar	*Visual		NEG		
		FLUID PROPE	RTIES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	11.9	11.6		
		GRAPHS						
		Ferrous Alloys						
	54	iron			-			
	Feb11/24	60 - https://www.nickel						
	LL.							
		E 200						
		30-						
		20-						
		/24						
		Feb 11			Feb11/24			
		Non-ferrous Meta	ls					
	10.11	120 copper 1						
	C.F.	100 - execution lead						
		80 -						
		Ē 60-						
		40-						
		20						
		0						
		Feb 11/24			Feb11/24			
	Č.	۳ Viscosity @ 100°	_		ц <u>г</u>			
	C.4.11	¹⁵ T	.		12.	Base Number		
		14 - Abnormal				Base		
		13			10.1 P	0		
					.8 .6 .9 .4 .4 .4	0		
		0012 - Base 000 33 11				0		
		10			UN 4.	0		
		Abnormal			2.	0		
		-			- 0.			
		8						
		8 1/24 8			1/24	1/2		
		6 Feb11/24			Feb11/24	Feb11/24		
	l obcustere:	_				_	ion Chan 1000	
4	Laboratory Sample No.	: WearCheck USA - 50	1 Madisc		, NC 27513	Transerv	ice - Shop 1920 - 1955 W. North	
	Laboratory Sample No. Lab Number	: WearCheck USA - 50 : PCA0116699		ived :15		Transerv	1955 W. North	Avenue, Bldg
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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)