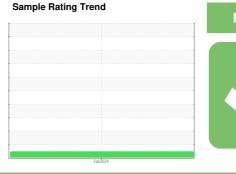


OIL ANALYSIS REPORT

(P981053) Somerset Service-Tractor [Somerset Service-Tractor] 248A8942

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

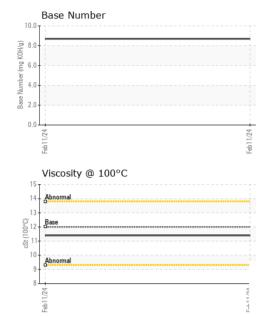
Fluid Condition

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

Sample Number Client Info PCA0116529	áAL)				Feb 2024		
Sample Date Client Info 11 Feb 2024	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 513322 Oil Age mls Client Info 26288 Oil Changed Client Info Changed Sample Status NORMAL CONTAMINATION method Imitibase current history1 history2 Fuel WC Method >2.2.0 <1.0	Sample Number		Client Info		PCA0116529		
Oil Age mls Client Info 26298 Oil Changed Client Info Changed Sample Status NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >2.0 <1.0 Water WC Method >0.2 NEG Glycol WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10.0 0 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10.0 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >3.0 0 Chromium ppm ASTM D5185	Sample Date		Client Info		11 Feb 2024		
Oil Changed Sample Status Client Info Changed NORMAL	Machine Age	mls	Client Info		513322		
CONTAMINATION	Oil Age	mls	Client Info		26298		
CONTAMINATION	Oil Changed		Client Info		Changed		
Fuel	Sample Status				NORMAL		
Water WC Method >0.2 NEG Glycol WC Method Imitivase current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 Chromium ppm ASTM D5185m >4 0 Nickel ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >20 1 Aluminum ppm ASTM D5185m >40 1 Lead ppm ASTM D5185m >40 1 Copper ppm ASTM D5185m >15 0 Vanadium ppm ASTM D5185m >15 0	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>2.0	<1.0		
WEAR METALS	Water		WC Method	>0.2	NEG		
Irron	Glycol		WC Method		NEG		
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	0		
Titanium	Chromium		ASTM D5185m	>20	<1		
Silver	Nickel	ppm	ASTM D5185m	>4	0		
Aluminum	Titanium	ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m	>3	0		
Copper ppm ASTM D5185m >330 0 Tin ppm ASTM D5185m >15 0 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>20	1		
Tin	Lead	ppm	ASTM D5185m	>40	1		
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 22 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 50 54 Manganese ppm ASTM D5185m 950 966 Magnesium ppm ASTM D5185m 950 966 Calcium ppm ASTM D5185m 995 1074 Phosphorus ppm ASTM D5185m 995 1074 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current hist	Copper	ppm	ASTM D5185m	>330	0		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 22 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 50 54 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	0		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 22 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 50 54 Manganese ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		<1		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 50 54 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 54 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 966 Calcium ppm ASTM D5185m 1050 1185 Phosphorus ppm ASTM D5185m 995 1074 Zinc ppm ASTM D5185m 995 1074 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m 2 Potassium ppm ASTM D7844 >3 0.2	Boron	ppm	ASTM D5185m	2	22		
Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 966 Calcium ppm ASTM D5185m 1050 1185 Phosphorus ppm ASTM D5185m 995 1074 Zinc ppm ASTM D5185m 1180 1251 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m 2 Soot % % *ASTM D7844 >3 0.2	Barium	ppm	ASTM D5185m	0	0		
Magnesium ppm ASTM D5185m 950 966 Calcium ppm ASTM D5185m 1050 1185 Phosphorus ppm ASTM D5185m 995 1074 Zinc ppm ASTM D5185m 1180 1251 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Sulfation Abs/.1mm *ASTM D7415 >30	Molybdenum	ppm		50	54		
Calcium ppm ASTM D5185m 1050 1185 Phosphorus ppm ASTM D5185m 995 1074 Zinc ppm ASTM D5185m 1180 1251 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m 20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><td><1</td><td></td><td></td></t<>	Manganese	ppm	ASTM D5185m	0	<1		
Phosphorus ppm ASTM D5185m 995 1074 Zinc ppm ASTM D5185m 1180 1251 Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base		ppm		950	966		
Zinc	Calcium	ppm	ASTM D5185m	1050	1185		
Sulfur ppm ASTM D5185m 2600 3173 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Phosphorus	ppm		995	1074		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Zinc	ppm	ASTM D5185m	1180	1251		
Silicon ppm ASTM D5185m >25 3 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Sulfur	ppm	ASTM D5185m	2600	3173		
Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Silicon	ppm	ASTM D5185m	>25	3		
INFRA-RED	Sodium	ppm	ASTM D5185m		2		
Soot % % *ASTM D7844 >3 0.2 Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Potassium	ppm	ASTM D5185m	>20	2		
Nitration Abs/cm *ASTM D7624 >20 5.8 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Soot %	%	*ASTM D7844	>3	0.2		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.6	Nitration	Abs/cm	*ASTM D7624	>20	5.8		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2		
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.7	Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6		
	Base Number (BN)	mg KOH/g	ASTM D2896		8.7		

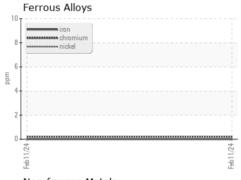


OIL ANALYSIS REPORT



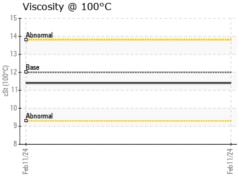
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPE	RTIES	method	limit/hase	current	history1	history2

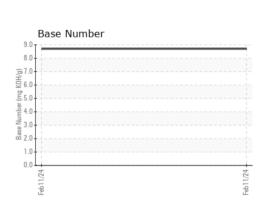
FLUID PROPE	ERITES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	12.00	11.4		



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										Esh11/24
	tin	tin .	tin	in tin	tin	tin	tin	in tin	isad tin	in tin







Certificate L2367

Laboratory Sample No.

: PCA0116529 Lab Number : 06100680 Unique Number : 10898910

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 26 Feb 2024 : 27 Feb 2024 Diagnosed : 27 Feb 2024 - Wes Davis

Transervice - Shop 2480 - Somerset Service 606 E. Bourne Avenue

Somerset, KY US 42501 Contact: Bart Beshears

Test Package : FLEET To discuss this sample report, contact Customer Service at 1-800-237-1369. Shop2480@transervice.com

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

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F: