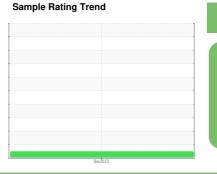


OIL ANALYSIS REPORT

(P798029) Preferred Service-Tractor [Preferred Service-Tractor] 192A01740

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

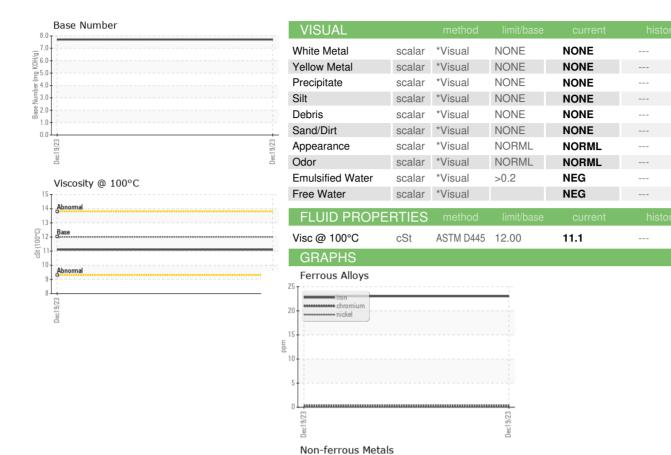
Fluid Condition

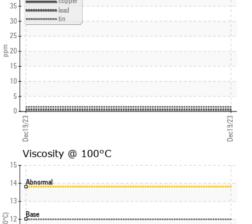
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

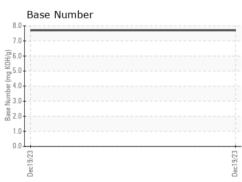
Sample Number Client Info PCA0114380	āAL)				Dec2023		
Sample Date Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 441223 Oil Changed Client Info 10132 Sample Status NORMAL CONTAMINATION method Imit base current history1 history1 Fuel WC Method >6.0 <1.0	Sample Number		Client Info		PCA0114380		
Oil Age mls Client Info 10132	Sample Date		Client Info		19 Dec 2023		
Oil Changed Sample Status Client Info Changed NORMAL	Machine Age	mls	Client Info		441223		
CONTAMINATION	Oil Age	mls	Client Info		10132		
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >6.0 <1.0	Oil Changed		Client Info		Changed		
Fuel WC Method So.0 Co.0 Co.0 Co.0 Co.0 Co.2 NEG Co.0 Co.	Sample Status				NORMAL		
Water WC Method >0.2 NEG Glycol WC Method Image: Neg WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 23 Chromium ppm ASTM D5185m >20 <1	CONTAMINATI	ON	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>6.0	<1.0		
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 23 Nickel ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG		
Chromium	Glycol		WC Method		NEG		
Chromium	WEAR METALS	5	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	23		
Titanium	Chromium		ASTM D5185m	>20	<1		
Silver	Nickel	ppm	ASTM D5185m	>2	<1		
Aluminum	Titanium	ppm	ASTM D5185m		<1		
Lead	Silver	ppm	ASTM D5185m	>2	0		
Copper ppm ASTM D5185m >330 40 Tin ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 histo Boron ppm ASTM D5185m 0 9 Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 0 -1 Manganese ppm ASTM D5185m 0 -1 Magnesium ppm ASTM D5185m 950 899 Calcium ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 995 1010	Aluminum	ppm	ASTM D5185m	>25	7		
Tin	Lead	ppm	ASTM D5185m	>40	<1		
Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 38 Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 0 9 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 899 Calcium ppm ASTM D5185m 1050 1148 Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>330</td> <th>40</th> <td></td> <td></td>	Copper	ppm	ASTM D5185m	>330	40		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 38 Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 50 73 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	2		
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 38 Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 50 73 Manganese ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0		
Boron ppm ASTM D5185m 2 38 Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 50 73 Magnese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 899 Magnesium ppm ASTM D5185m 1050 1148 Magnesium ppm ASTM D5185m 2600 3105 Magnesium ppm ASTM D5185m 2600 3105 Magnesium ppm ASTM D5185m 2600 3105 Magnesium ppm ASTM D5185m 225 15 Magnesium ppm ASTM D5185m 220 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21 Magnesium ppm ASTM D5185m 20 21	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 0 9 Molybdenum ppm ASTM D5185m 50 73 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 73 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 899 Calcium ppm ASTM D5185m 1050 1148 Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 2600 3105 Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m >20 21 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base	Boron	ppm	ASTM D5185m	2	38		
Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 950 899 Calcium ppm ASTM D5185m 1050 1148 Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 2600 3105 Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m >20 21 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7624	Barium	ppm	ASTM D5185m	0	9		
Magnesium ppm ASTM D5185m 950 899 Calcium ppm ASTM D5185m 1050 1148 Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 1180 1161 Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 histo Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m >20 21 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 histo Soot % % *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7414	Molybdenum	ppm	ASTM D5185m	50	73		
Calcium ppm ASTM D5185m 1050 1148 Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 1180 1161 Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 histo Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 histo Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7415 >30 19.7 FLUID DEGRADATION *ASTM D7414 >25 15.5 <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th><1</th> <td></td> <td></td>	Manganese	ppm	ASTM D5185m	0	<1		
Phosphorus ppm ASTM D5185m 995 1010 Zinc ppm ASTM D5185m 1180 1161 Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 histor Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 histor Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 history1 history1 Oxidation Abs/.1mm <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>950</td> <th>899</th> <td></td> <td></td>	Magnesium	ppm	ASTM D5185m	950	899		
Zinc	Calcium	ppm	ASTM D5185m	1050	1148		
Sulfur ppm ASTM D5185m 2600 3105 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 history1 Soot % % *ASTM D7844 >3 1 Nitration Abs/.mm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Phosphorus	ppm	ASTM D5185m	995	1010		
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 histo Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Zinc	ppm	ASTM D5185m	1180	1161		
Silicon ppm ASTM D5185m >25 15 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 history1 Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Sulfur	ppm	ASTM D5185m	2600	3105		
Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 history1 Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 history1 history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.5	CONTAMINAN ⁻	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 21 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 histo Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Silicon	ppm	ASTM D5185m	>25	15		
INFRA-RED	Sodium	ppm	ASTM D5185m		0		
Soot % % *ASTM D7844 >3 1 Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 histo Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Potassium	ppm	ASTM D5185m	>20	21		
Nitration Abs/cm *ASTM D7624 >20 8.2 Sulfation Abs/.1mm *ASTM D7615 >30 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 15.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.7 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Soot %	%	*ASTM D7844	>3	1		
FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 15.5	Nitration	Abs/cm	*ASTM D7624	>20	8.2		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7		
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Door Misselson (DM) welfolls ACTM DOORS	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5		
Base Number (BIN) ing KOH/g ASTM D2896 7.7	Base Number (BN)	mg KOH/g	ASTM D2896		7.7		



OIL ANALYSIS REPORT











Certificate L2367

Laboratory Sample No. Lab Number Unique Number Test Package : FLEET

cSt (10

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0114380 : 06045407

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: 10806015

Recieved Diagnosed Diagnostician

: 26 Dec 2023 : 27 Dec 2023 : Wes Davis

Dec19/23

Transervice - Shop 1920 - Preferred Service 1955 W. North Avenue, Bldg K Melrose Park, IL US 60160 Contact: Tom Lindeman

tlindemann@transervice.com T: (630)376-8946

* - 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)