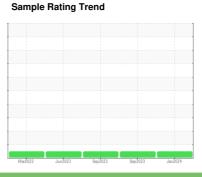


OIL ANALYSIS REPORT

(30563Z) Walgreens - Tractor [Walgreens - Tractor] 136A62570

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

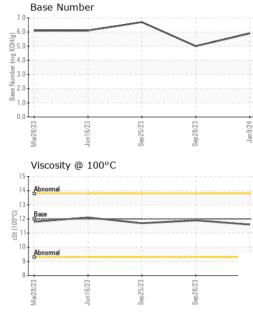
Fluid Condition

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

			Mar2023	Jun2023	Sep2023 Sep2023	Jan2024	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 356023 329300 283035 Oil Age mls Client Info 356023 38900 283035 Oil Changed Client Info Changed Chang	Sample Number		Client Info		PCA0110571	PCA0093516	PCA0093482
Oil Age mls Client Info 356023 38900 283035 Oil Changed Chan	Sample Date		Client Info		09 Jan 2024	28 Sep 2023	25 Sep 2023
Oil Changed Sample Status Client Info Changed NORMAL Change NoE Change NoE Change NoE Change NoRMAL Change NoRMAL Change NoRMAL Change NoRMAL Change NoRMAL Change NoRMAN Change NoRMAN Change NoRMAN	Machine Age	mls	Client Info		356023	321935	283035
Sample Status	Oil Age	mls	Client Info		356023	38900	283035
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method >0.2 NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >80 15 21 13 Chromitim ppm ASTM D5185m >5 <1 2 1 Nickel ppm ASTM D5185m >2 0 <1 <1 Sliver ppm ASTM D5185m >2 0 0 0 Sliver ppm ASTM D5185m >30 0 0 0 Sliver ppm ASTM D5185m >30 0 0 0 Sliver ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >5 0 <1 <1 Vanadium ppm ASTM D5185m >0 0	CONTAMINATI	ON	method	limit/base	current	history1	history2
Second WC Method MEG NEG NEG WEAR METALS method limit/base current history1 history2 history2 lron ppm ASTM D5185m >5 <1 2 1 13 16 15 17 10 16 16 16 16 17 10 16 16 16 17 10 16 16 17 10 16 16 17 10 10 10 10 10 10 10	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 <1	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	15	21	13
Titanium ppm ASTM D5185m 4 13 16 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >30 6 17 10 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 4 5 7 Tin ppm ASTM D5185m >5 0 <1 <1 Vanadium ppm ASTM D5185m >5 0 <1 <1 Cadmium ppm ASTM D5185m 0 <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 0	Chromium	ppm	ASTM D5185m	>5	<1	2	1
Silver	Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum ppm ASTM D5185m >30 6 17 10 Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 4 5 7 Tin ppm ASTM D5185m >5 0 <1	Titanium	ppm	ASTM D5185m		4	13	16
Lead ppm ASTM D5185m >30 0 0 0 Copper ppm ASTM D5185m >150 4 5 7 Tin ppm ASTM D5185m >5 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 0 0 0 Abdrain ppm ASTM D5185m 950 845 949 892	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >150 4 5 7 Tin ppm ASTM D5185m >5 0 <1	Aluminum	ppm	ASTM D5185m	>30	6	17	10
Tin ppm ASTM D5185m >5 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 8 5 9 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 50 54 52 48 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 2600 2722 331	Lead	ppm	ASTM D5185m	>30	0	0	0
Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 8 5 9 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 50 54 52 48 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current his	Copper	ppm	ASTM D5185m	>150	4	5	7
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 8 5 9 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>5	0	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	<1
Boron ppm ASTM D5185m 2 8 5 9 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 0 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm AS	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/ba	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 54 52 48 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base <t< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td>2</td><th>8</th><td>5</td><td>9</td></t<>	Boron	ppm	ASTM D5185m	2	8	5	9
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7624 >20	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 845 949 892 Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 5 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D741	Molybdenum	ppm	ASTM D5185m	50	54	52	48
Calcium ppm ASTM D5185m 1050 1081 1366 1363 Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION <	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 995 899 1124 1118 Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/	Magnesium	ppm	ASTM D5185m	950	845	949	892
Zinc ppm ASTM D5185m 1180 1194 1437 1402 Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Calcium	ppm	ASTM D5185m	1050	1081	1366	1363
Sulfur ppm ASTM D5185m 2600 2722 3317 3481 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m >20 6 22 4 Potassium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Phosphorus	ppm	ASTM D5185m	995	899	1124	1118
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m <1	Zinc	ppm	ASTM D5185m	1180	1194	1437	1402
Silicon ppm ASTM D5185m >20 6 6 5 Sodium ppm ASTM D5185m <1 2 4 Potassium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Sulfur	ppm	ASTM D5185m	2600	2722	3317	3481
Sodium ppm ASTM D5185m <1 2 4 Potassium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 6 22 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Silicon	ppm	ASTM D5185m	>20	6		
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Sodium	ppm	ASTM D5185m		<1	2	4
Soot % % *ASTM D7844 >3 0.8 1.2 0.7 Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Potassium	ppm	ASTM D5185m	>20	6	22	7
Nitration Abs/cm *ASTM D7624 >20 9.0 9.9 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 21.5 24.1 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Soot %	%	*ASTM D7844	>3	0.8	1.2	0.7
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2517.118.414.8	Nitration	Abs/cm	*ASTM D7624	>20	9.0	9.9	8.4
Oxidation Abs/.1mm *ASTM D7414 >25 17.1 18.4 14.8	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	24.1	20.1
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 5.9 5.0 6.7	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	18.4	14.8
	Base Number (BN)	mg KOH/g	ASTM D2896		5.9	5.0	6.7



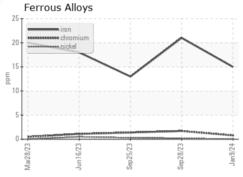
OIL ANALYSIS REPORT

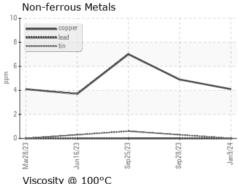


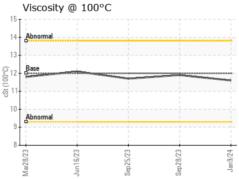
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

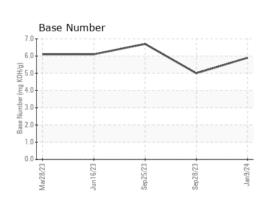
FLUID PROPI	EHILO	method			riistory i	nistoryz
Visc @ 100°C	cSt	ASTM D445	12.00	11.6	11.9	11.7

GRAPHS













Laboratory Sample No. Lab Number Unique Number : 10844016 Test Package : FLEET

: PCA0110571 : 06067339

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 22 Jan 2024 Diagnosed : 23 Jan 2024

Diagnostician : Wes Davis

Transervice - Shop 1376 - Berkeley-Linden 3425 Tremley Point Road

Linden, NJ US 07036

Contact: Shop 1376 Oil Analysis shop1376@transervice.com

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

* - 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)

T:

F: