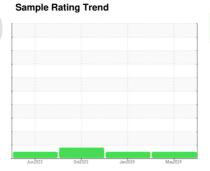


OIL ANALYSIS REPORT

Walgreens - Tractor [Walgreens - Tractor] 136A63372

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

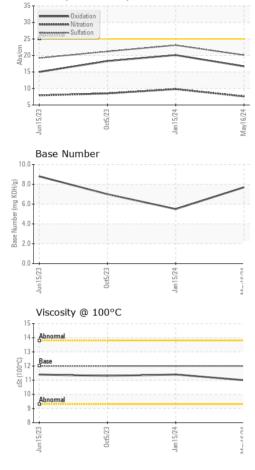
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 bistory2 Sample Number Client Info 16 May 2024 15 Jan 2024 9CA0105451 PCA0105431 Sample Date Client Info 129857 110148 85195 Machine Age mls Client Info 19709 50000 25000 Oil Age mls Client Info Not Changd Changed Not Changd Sample Status Not Changd Not Changd Not Changd Not Changd Sample Status WC Method >2.0 <1.0 <1.0 <1.0 Very Common Status WC Method >0.2 NEG NEG NEG Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG Iron ppm ASTM 05165m >20 2 3 1 1 Iron ppm ASTM 05165m >2 3 4							
Sample Date Client Info 16 May 2024 15 Jan 2024 05 Oct 2023 Machine Age mis Client Info 129857 110148 85195 Oil Age mis Client Info 19709 50000 25000 Oil Changed Client Info Not Changed NorMAL Not Changed ABNORMAL NorMAL ABNORMAL CONTAMINATION method limit/bass current history1 history2 Fuel WC Method >2.2.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Givcol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/bass current history1 history2 Iron ppm ASTM D5185n >10.0 22 35 22 Chromium ppm ASTM D5185n >10.0 2 3 1 Nickel ppm ASTM D5185n >2 1 0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 129857 110148 85195 Oil Age mls Client Info 19709 500000 25000 Oil Changed Client Info Not Changd Changed Changed Changed Changed Changed Sample Status Client Info Not Changd NoRMAL NoRMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >2.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history2 Iron ppm ASTM D5186m >100 22 35 22 Chromium ppm ASTM D5186m >20 2 3 1 Nickel ppm ASTM D5186m >3 >1 <1 <1 <1 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>PCA0117825</th> <th>PCA0105451</th> <th>PCA0105433</th>	Sample Number		Client Info		PCA0117825	PCA0105451	PCA0105433
Oil Age mls Client Info 19709 50000 25000 Oil Changed Client Info Not Changed Not Changed Not Changed Sample Status Client Info NoRMAL NORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Euel WC Method S2.0 < 1.0	Sample Date		Client Info		16 May 2024	15 Jan 2024	05 Oct 2023
Oil Changed Sample Status Client Info Not Changd NORMAL Changed NORMAL Not Changed ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >2.0 <1.0	Machine Age	mls	Client Info		129857	110148	85195
CONTAMINATION	Oil Age	mls	Client Info		19709	50000	25000
Fuel	Oil Changed		Client Info		Not Changd	Changed	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	ABNORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 22 35 22 Chromium ppm ASTM D5185m >20 2 3 1 Nickel ppm ASTM D5185m >4 3 4 6 Silver ppm ASTM D5185m >4 3 4 6 Silver ppm ASTM D5185m >20 7 13 8 Lead ppm ASTM D5185m >30 4 8 16 Tin ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m >15 1 3 1 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>2.0	<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 >20 2 3 1 Nickel ppm ASTM D5185m >4 3 4 ▲ 6 Tittanium ppm ASTM D5185m >3 <1 0 <1 Silver ppm ASTM D5185m >3 <1 <1 <1 Aluminum ppm ASTM D5185m >3 <1 <1 <1 Aluminum ppm ASTM D5185m >40 2 7 3 Lead ppm ASTM D5185m >40 2 7 3 Copper ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m >1 1 1 1 Cadmium ppm ASTM D5185m 2 5 11	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >4 3 4 ♠ 6 Titanium ppm ASTM D5185m <1 0 <1 Silver ppm ASTM D5185m >3 <1 <1 <1 Aluminum ppm ASTM D5185m >20 7 13 8 Lead ppm ASTM D5185m >330 4 8 16 Tin ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Cadmium 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 Boron ppm ASTM D5185m 0 0 0 0	Iron	ppm	ASTM D5185m	>100		35	22
Titanium ppm ASTM D5185m <1	Chromium	ppm	ASTM D5185m	>20	2	3	1
Stilver	Nickel	ppm	ASTM D5185m	>4	3	4	6
Aluminum ppm ASTM D5185m >20 7 13 8 Lead ppm ASTM D5185m >40 2 7 3 Copper ppm ASTM D5185m >330 4 8 16 Tin ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Cadmium 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 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 </th <th>Titanium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th><1</th> <th>0</th> <th><1</th>	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead ppm ASTM D5185m >40 2 7 3 Copper ppm ASTM D5185m >330 4 8 16 Tin ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m < 1	Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Copper ppm ASTM D5185m >330 4 8 16 Tin ppm ASTM D5185m >15 1 3 1 Vanadium ppm ASTM D5185m <1 <1 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 1 <1 Manganese ppm ASTM D5185m 950 59 53 54 Manganese ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 2600 3080 <td< th=""><th>Aluminum</th><th>ppm</th><th>ASTM D5185m</th><th>>20</th><th>7</th><th>13</th><th>8</th></td<>	Aluminum	ppm	ASTM D5185m	>20	7	13	8
Tin	Lead	ppm	ASTM D5185m	>40	2	7	3
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>330	4	8	16
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 5 11 16 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 59 53 54 Manganese ppm ASTM D5185m 0 <1 1 <1 Magnesium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 his	Tin	ppm	ASTM D5185m	>15	1	3	1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 5 11 16 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 59 53 54 Manganese ppm ASTM D5185m 50 59 53 54 Magnesium ppm ASTM D5185m 50 59 53 54 Magnesium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base	Vanadium	ppm	ASTM D5185m		<1	<1	<1
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 59 53 54 Manganese ppm ASTM D5185m 0 <1 1 <1 Magnesium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 1050 1149 1236 1320 Phosphorus ppm ASTM D5185m 1050 1149 1236 1320 Phosphorus ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 1180 1250 1245 1279 Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 59 53 54 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	2	5	11	16
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 909 780 737 Calcium ppm ASTM D5185m 1050 1149 1236 1320 Phosphorus ppm ASTM D5185m 1050 1149 1236 1320 Phosphorus ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 1180 1250 1245 1279 Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cmm	Molybdenum	ppm	ASTM D5185m	50	59	53	54
Calcium ppm ASTM D5185m 1050 1149 1236 1320 Phosphorus ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 1180 1250 1245 1279 Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION	Manganese	ppm	ASTM D5185m	0	<1	1	<1
Phosphorus ppm ASTM D5185m 995 947 994 931 Zinc ppm ASTM D5185m 1180 1250 1245 1279 Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION meth	Magnesium	ppm	ASTM D5185m	950	909	780	737
Zinc ppm ASTM D5185m 1180 1250 1245 1279 Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Calcium	ppm	ASTM D5185m	1050	1149	1236	1320
Sulfur ppm ASTM D5185m 2600 3080 2642 3079 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m >20 22 35 25 Potassium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3			ASTM D5185m		947	994	931
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m <1 4 0 Potassium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3		ppm	ASTM D5185m	1180	1250	1245	1279
Silicon ppm ASTM D5185m >25 8 15 12 Sodium ppm ASTM D5185m <1				2600	3080		
Sodium ppm ASTM D5185m <1	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 22 35 25 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3		ppm		>25	8		
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Sodium	ppm	ASTM D5185m		<1	4	0
Soot % % *ASTM D7844 >3 0.3 0.4 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Potassium	ppm	ASTM D5185m	>20	22	35	25
Nitration Abs/cm *ASTM D7624 >20 7.6 9.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 23.1 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Soot %	%	*ASTM D7844	>3	0.3	0.4	0.3
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Nitration	Abs/cm	*ASTM D7624	>20	7.6	9.8	8.5
Oxidation Abs/.1mm *ASTM D7414 >25 16.7 20.1 18.3	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	23.1	21.2
	FLUID DEGRAD	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 7.7 5.5 7.0	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	20.1	18.3
	Base Number (BN)	mg KOH/g	ASTM D2896		7.7	5.5	7.0



FT-IR (Direct Trend)

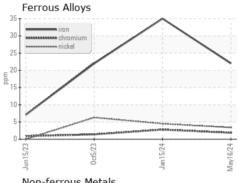
OIL ANALYSIS REPORT

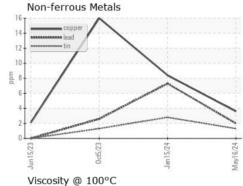


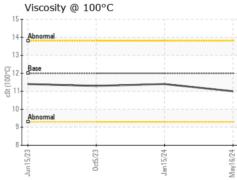
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

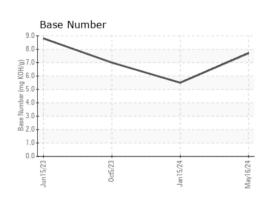
L LOID LUCLI		memod			HISTOLAL	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.4	11.3

GRAPHS













Certificate 12367

Laboratory Sample No.

: PCA0117825 Lab Number : 06188708 Unique Number : 11045460 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 May 2024 **Tested**

: 24 May 2024 Diagnosed : 24 May 2024 - Wes Davis

Transervice - Shop 1366 - Berkeley-Woodland

2370 East Main Street Woodland, CA US 95776

Contact: Gary Mann gmann@transervice.com T: (530)666-7771

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)

F: (530)406-7971