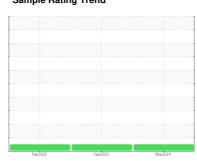


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **617196**

Component **Diesel Engine**

PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

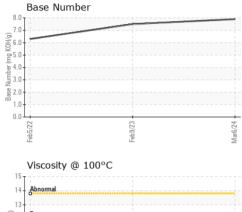
Fluid Condition

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

Client Info	AL)		Fel	2022	Feb 2023 Mar 20	24	
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 0 78046 44035	Sample Number		Client Info		PCA0118995	PCA0085199	PCA0067646
Dil Age	Sample Date		Client Info		06 Mar 2024	09 Feb 2023	05 Feb 2022
Contained Client Info Changed Changed Changed NORMAL NORMAL NORMAL NORMAL	Machine Age	mls	Client Info		0	78046	44035
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 history2	Oil Age	mls	Client Info		9210	30000	6000
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Gilycol 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 16 14 56 Chromium ppm ASTM D5185m >4 0 <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 16 14 56 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Post	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>100	16	14	56
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	1	6
Silver	Nickel	ppm	ASTM D5185m	>4	0	<1	0
Aluminum	Titanium	ppm	ASTM D5185m		1	4	0
Lead	Silver	ppm	ASTM D5185m	>3	0	<1	<1
Copper	Aluminum	ppm	ASTM D5185m	>20	4	4	26
Antimony	_ead	ppm	ASTM D5185m	>40	0	1	6
Antimony	Copper	ppm	ASTM D5185m	>330	17	63	749
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 8 6 13 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 60 52 6 Magnesium ppm ASTM D5185m 0 0 <1 6 Magnesium ppm ASTM D5185m 950 919 811 775 Calcium ppm ASTM D5185m 950 1214 1219 1406 Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 his	Γin	ppm	ASTM D5185m	>15	<1	2	7
Description	Antimony	ppm	ASTM D5185m				<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 8 6 13 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 60 52 6 Manganese ppm ASTM D5185m 0 0 <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 2 8 6 13	Cadmium	ppm	ASTM D5185m		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 60 52 6 Manganese ppm ASTM D5185m 0 0 <1 6 Magnesium ppm ASTM D5185m 950 919 811 775 Calcium ppm ASTM D5185m 1050 1214 1219 1406 Phosphorus ppm ASTM D5185m 1050 1214 1219 1406 Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 1180 1252 1122 892 Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base </td <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <th>8</th> <td>6</td> <td>13</td>	Boron	ppm	ASTM D5185m	2	8	6	13
Manganese ppm ASTM D5185m 0 0 <1 6 Magnesium ppm ASTM D5185m 950 919 811 775 Calcium ppm ASTM D5185m 1050 1214 1219 1406 Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 1180 1252 1122 892 Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7845<	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 919 811 775 Calcium ppm ASTM D5185m 1050 1214 1219 1406 Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 1180 1252 1122 892 Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/.1mm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D74	Molybdenum	ppm	ASTM D5185m	50	60	52	6
Calcium ppm ASTM D5185m 1050 1214 1219 1406 Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 1180 1252 1122 892 Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >25 4 4 7 Solicon ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID D	Manganese	ppm	ASTM D5185m	0	0	<1	6
Phosphorus ppm ASTM D5185m 995 1112 881 765 Zinc ppm ASTM D5185m 1180 1252 1122 892 Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm	Magnesium	ppm	ASTM D5185m	950	919	811	775
Zinc ppm ASTM D5185m 1180 1252 1122 892	Calcium	ppm	ASTM D5185m	1050	1214	1219	1406
Sulfur ppm ASTM D5185m 2600 3354 2911 2441 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m 0 2 7 Potassium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Phosphorus	ppm	ASTM D5185m	995	1112	881	765
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m 0 2 7 Potassium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Zinc	ppm	ASTM D5185m	1180	1252	1122	892
Silicon ppm ASTM D5185m >25 4 4 7 Sodium ppm ASTM D5185m 0 2 7 Potassium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Sulfur	ppm	ASTM D5185m	2600	3354	2911	2441
Sodium ppm ASTM D5185m 0 2 7 Potassium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 8 11 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Silicon	ppm	ASTM D5185m	>25			
INFRA-RED	Sodium	ppm	ASTM D5185m		0	2	7
Soot % % *ASTM D7844 >3 0.4 0.5 1.1 Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Potassium	ppm	ASTM D5185m	>20	8	11	67
Nitration Abs/cm *ASTM D7624 >20 7.0 8.0 14.5 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.7 19.4 27.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Soot %	%	*ASTM D7844	>3	0.4	0.5	1.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 15.2 24.2	Nitration	Abs/cm	*ASTM D7624	>20	7.0	8.0	14.5
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	19.4	27.0
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 7.9 7.5 6.3	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	15.2	24.2
	Base Number (BN)	mg KOH/g	ASTM D2896		7.9	7.5	6.3

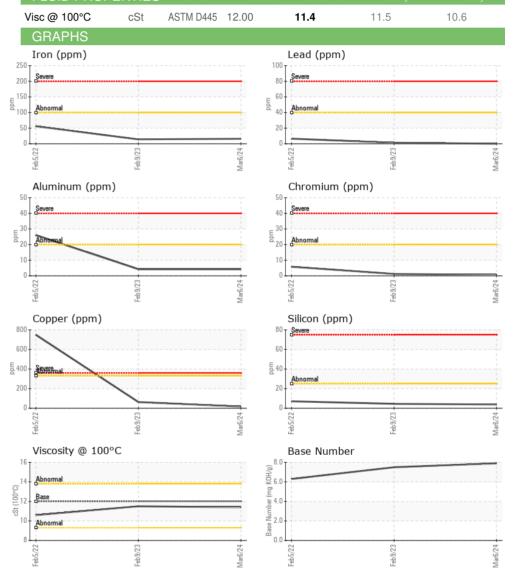


OIL ANALYSIS REPORT



VISUAL		method				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 PROPE	RTIES	method	limit/hase	current	history1	history2

15		
14 - Abnormal		
Base		
Base 112 - Base 111 -		
3 10		
Abnormal		
8		
Feb 5/22	Feb 9/23 -	
<u> </u>	2	







Laboratory Sample No. Unique Number : 10929449

: PCA0118995 Lab Number : 06120616

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 18 Mar 2024 **Tested**

Diagnosed Test Package : MOB 1 (Additional Tests: TBN)

: 19 Mar 2024 : 19 Mar 2024 - Wes Davis

PHILADELPHIA, PA

Contact: ROSTY VITER rviter@millertransgroup.com T: (215)552-9832

2196 BENNETT ROAD

MILLER TRUCK LEASING #118

* - 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)

Contact/Location: ROSTY VITER - MILPHINE

F: (215)552-9892

US 19116