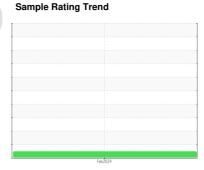


OIL ANALYSIS REPORT



NORMAL



20607 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- G

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

Sample Number Client Info PCA0114590							, i
Sample Number Client Info PCA0114590	AL)				Feb2024		
Client Info	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Client Info	Sample Number		Client Info		PCA0114590		
Dil Age			Client Info		05 Feb 2024		
Dil Age	•	mls	Client Info		59832		
Contact Cont		mls	Client Info		59832		
CONTAMINATION method mimit/base current history1 history2	-		Client Info		Changed		
WEAR METALS	-						
Water WC Method >0.2 NEG WEAR METALS method Imit/base current history1 history2 Fron ppm ASTM D5185m >100 53 Chromium ppm ASTM D5185m >20 2 Silver ppm ASTM D5185m >4 0 Aluminum ppm ASTM D5185m >3 <1 Aluminum ppm ASTM D5185m >30 23 <1 Lead ppm ASTM D5185m >20 24 Lead ppm ASTM D5185m >30 23 Copper ppm ASTM D5185m >40 4 Vanadium ppm ASTM D5185m 0 0 Aportium ppm ASTM D5185m 0 <th< td=""><td>CONTAMINAT</td><td>ION</td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></th<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 ron ppm ASTM D5185m >100 53 Chromium ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >3 -1 Aluminum ppm ASTM D5185m >20 24 Lead ppm ASTM D5185m >20 24 Lead ppm ASTM D5185m >330 23 Lead ppm ASTM D5185m >15 2 Lead ppm ASTM D5185m 0 4 Lead ppm ASTM D5185m >15 2 Copper ppm ASTM D5185m 0 0	-uel		WC Method	>5	<1.0		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 53 Chromium ppm ASTM D5185m >20 2 Nickel ppm ASTM D5185m >4 0 Silver ppm ASTM D5185m >3 -1 Aluminum ppm ASTM D5185m >20 24 Lead ppm ASTM D5185m >20 24 Lead ppm ASTM D5185m >330 23 Copper ppm ASTM D5185m >15 2 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 2 20 Barium ppm ASTM D5185m 0 <t< td=""><td>Water</td><td></td><td>WC Method</td><td>>0.2</td><td>NEG</td><td></td><td></td></t<>	Water		WC Method	>0.2	NEG		
Chromium	MEAD METAL	C				history	hiotom/0
Chromium	WEAR METAL	S	method	IIIIII/Dase	current	riistory i	riistoryz
ASTM D5185m SATM D5185m	ron	ppm	ASTM D5185m	>100	53		
Description	Chromium	ppm	ASTM D5185m	>20	2		
ASTM D5185m >3	Nickel	ppm		>4	0		
Aluminum	Γitanium	ppm	ASTM D5185m		0		
December December	Silver	ppm	ASTM D5185m	>3	<1		
Copper	Aluminum	ppm	ASTM D5185m	>20	24		
Act	_ead	ppm	ASTM D5185m	>40	4		
Anadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 20 Barium ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 50 49 Magnesium ppm ASTM D5185m 950 388 Calcium ppm ASTM D5185m 950 388 Phosphorus ppm ASTM D5185m 995 849 Phosphorus ppm ASTM D5185m 995 849 Polifur ppm ASTM D5185m 995 849 Sulfur ppm ASTM D5185m 20 288 -	Copper	ppm	ASTM D5185m	>330	23		
ADDITIVES	Γin	ppm	ASTM D5185m	>15	2		
ADDITIVES	/anadium	ppm	ASTM D5185m		0		
Boron ppm ASTM D5185m 2 20	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 49 Manganese ppm ASTM D5185m 0 5 Magnesium ppm ASTM D5185m 950 388 Calcium ppm ASTM D5185m 1050 1571 Phosphorus ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 2600 2288 Sulfur ppm ASTM D5185m 2600 2288 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Potassium ppm ASTM D5185m 20 75 Glycol *ASTM D5285m >20	Boron	ppm	ASTM D5185m	2	20		
Manganese ppm ASTM D5185m 0 5 Magnesium ppm ASTM D5185m 950 388 Calcium ppm ASTM D5185m 1050 1571 Phosphorus ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 1180 1098 Zinc ppm ASTM D5185m 2600 2288 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Godium ppm ASTM D5185m >20 75 Potassium ppm ASTM D5185m >20 75 Glycol "ASTM D5185m >20 75 Slycol "ASTM D5185m >20 75	Barium	ppm	ASTM D5185m	0	0		
Magnesium ppm ASTM D5185m 950 388 Calcium ppm ASTM D5185m 1050 1571 Phosphorus ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 1180 1098 Sulfur ppm ASTM D5185m 2600 2288 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D5185m >20 75 Glycol % *ASTM D5185m >20 75 Glyc	Molybdenum	ppm	ASTM D5185m	50	49		
Calcium ppm ASTM D5185m 1050 1571 Phosphorus ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 1180 1098 Sulfur ppm ASTM D5185m 2600 2288 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Sodium ppm ASTM D5185m >20 75 Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 Soot % % *ASTM D7845 >30	Manganese	ppm	ASTM D5185m	0	5		
Phosphorus ppm ASTM D5185m 995 849 Zinc ppm ASTM D5185m 1180 1098 Sulfur ppm ASTM D5185m 2600 2288 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 Sulfation Abs/.1mm *ASTM D7415 >30 27.3	Magnesium	ppm	ASTM D5185m	950	388		
The color of the	Calcium	ppm	ASTM D5185m	1050	1571		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 Nitration Abs/cm *ASTM D7624 >20 12.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	Phosphorus	ppm	ASTM D5185m	995	849		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 31 Sodium ppm ASTM D5185m 2 Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 Solfation Abs/cm *ASTM D7624 >20 12.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	Zinc	ppm	ASTM D5185m	1180	1098		
Solition ppm ASTM D5185m >25 31	Sulfur	ppm	ASTM D5185m	2600	2288		
Potassium ppm ASTM D5185m 2	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Goot % % *ASTM D7844 >3 0.3 Vitration Abs/cm *ASTM D7624 >20 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 27.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	Silicon	ppm	ASTM D5185m	>25	31		
Potassium ppm ASTM D5185m >20 75 Glycol % *ASTM D2982 NEG INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 Nitration Abs/cm *ASTM D7624 >20 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 27.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	Sodium	ppm	ASTM D5185m		2		
INFRA-RED	Potassium	ppm	ASTM D5185m	>20	75		
Soot %	Glycol	%	*ASTM D2982		NEG		
Nitration Abs/cm *ASTM D7624 >20 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 27.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 12.0 Sulfation Abs/.1mm *ASTM D7415 >30 27.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9	Soot %	%	*ASTM D7844	>3	0.3		
Sulfation Abs/.1mm *ASTM D7415 >30 27.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9							
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 29.9							
Oxidation							
						history1	history2
Base Number (BN) mg KOH/g ASTM D2896 3.0				>25			
	Base Number (BN)	mg KOH/g	ASTM D2896		3.0		



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number

: 06095286 **Unique Number** : 10888139

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0114590 Received **Tested**

Diagnosed

: 23 Feb 2024 - Sean Felton Test Package: MOB 1 (Additional Tests: Glycol, TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

: 21 Feb 2024

: 23 Feb 2024

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

MILLER TRUCK LEASING #118

2196 BENNETT ROAD PHILADELPHIA, PA US 19116

Contact: ROSTY VITER rviter@millertransgroup.com

T: (215)552-9832 F: (215)552-9892

Contact/Location: ROSTY VITER - MILPHINE

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