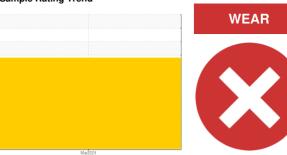


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

1324168

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- G

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear

Piston and cylinder wear is indicated.

Contamination

There is no indication of any contamination in the

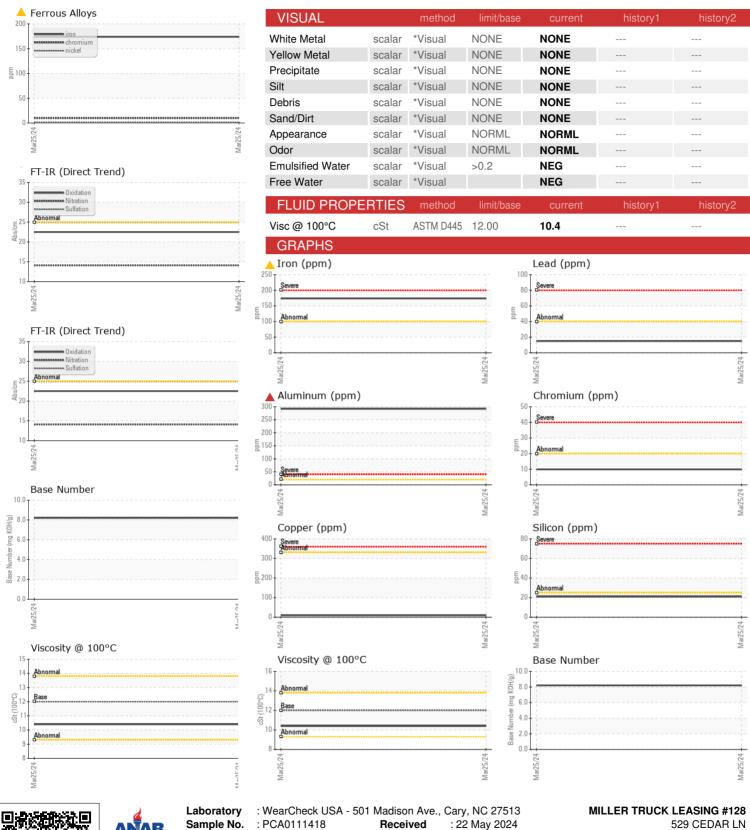
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

iAL)			M	vlar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111418		
Sample Date		Client Info		25 Mar 2024		
Machine Age	mls	Client Info		311501		
Oil Age	mls	Client Info		311501		
Oil Changed		Client Info		Changed		
Sample Status				SEVERE		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<u> </u>		
Chromium	ppm	ASTM D5185m	>20	10		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	292		
Lead	ppm	ASTM D5185m	>40	15		
Copper	ppm	ASTM D5185m	>330	10		
Tin	ppm	ASTM D5185m	>15	1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	2		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	87		
Manganese	ppm	ASTM D5185m	0	2		
Magnesium	ppm	ASTM D5185m	950			
Calcium	nnm			1144		
	ppm	ASTM D5185m	1050	1144 1459		
Phosphorus	ppm	ASTM D5185m	1050 995	1459 1215		
Zinc		ASTM D5185m ASTM D5185m	995 1180	1459 1215 1439		
Zinc Sulfur	ppm ppm ppm	ASTM D5185m	995	1459 1215		
Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m	995 1180	1459 1215 1439		
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	995 1180 2600	1459 1215 1439 3463 current		
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25	1459 1215 1439 3463 current 21	 history1	history2
Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	995 1180 2600 limit/base	1459 1215 1439 3463 current	 history1	history2
Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ITS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25	1459 1215 1439 3463 current 21	 history1	history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25 >20	1459 1215 1439 3463 current 21 7	 history1	history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ITS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	995 1180 2600 limit/base >25 >20 limit/base	1459 1215 1439 3463 current 21 7 2	 history1 history1	history2 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ITS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m	995 1180 2600 limit/base >25 >20 limit/base >3	1459 1215 1439 3463 current 21 7 2 current 0.9	history1 history1	history2 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm lTS ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	995 1180 2600 limit/base >25 >20 limit/base >3 >20	1459 1215 1439 3463 current 21 7 2 current 0.9 14.1	history1 history1	history2 history2
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm lTS ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	1459 1215 1439 3463	history1 history1 history1	history2 history2



OIL ANALYSIS REPORT







Certificate 12367

Report Id: MILFLO [WUSCAR] 06188375 (Generated: 05/28/2024 15:20:35) Rev: 1

Sample No.

Lab Number : 06188375 Unique Number : 11045127

: PCA0111418

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

Received **Tested** Diagnosed

: 22 May 2024 : 28 May 2024

: 28 May 2024 - Jonathan Hester

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

US 08518 Contact: PETER SHEPARD pshepard@millertransgroup.com T: (609)499-3601

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

Contact/Location: PETER SHEPARD - MILFLO

FLORENCE, NJ