

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **390485**

Component Diesel Engine Fluid 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.

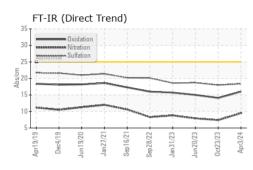
Fluid Condition

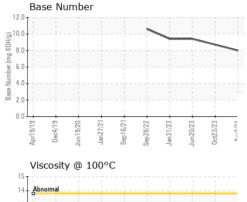
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

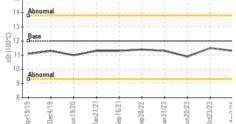
	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101976	PCA0099003	PCA0098993
Sample Date		Client Info		03 Apr 2024	23 Oct 2023	20 Jun 2023
Machine Age	mls	Client Info		89348	83863	79435
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	10	11	8
Chromium	ppm	ASTM D5185m		<1	<1	0
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m	27	<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	<1
Lead	ppm	ASTM D5185m	>40	2	<1	<1
Copper	ppm	ASTM D5185m		2	3	2
Tin	ppm	ASTM D5185m	>15	<u>ہ</u> <1	0	<1
Vanadium	ppm	ASTM D5185m	>15	<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES	ppin			~!	-	-
		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	11	15	16
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	11 0	15 0	16 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	11 0 68	15 0 67	16 0 69
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	11 0 68 <1	15 0 67 <1	16 0 69 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	11 0 68 <1 898	15 0 67 <1 745	16 0 69 <1 881
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	11 0 68 <1 898 1442	15 0 67 <1 745 1178	16 0 69 <1 881 1139
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	11 0 68 <1 898 1442 1165	15 0 67 <1 745 1178 979	16 0 69 <1 881 1139 1053
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	11 0 68 <1 898 1442 1165 1425	15 0 67 <1 745 1178 979 1240	16 0 69 <1 881 1139 1053 1208
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	11 0 68 <1 898 1442 1165	15 0 67 <1 745 1178 979	16 0 69 <1 881 1139 1053
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	11 0 68 <1 898 1442 1165 1425 4226 current	15 0 67 <1 745 1178 979 1240 3061 history1	16 0 69 <1 881 1139 1053 1208 3216 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	11 0 68 <1 898 1442 1165 1425 4226 current 3	15 0 67 <1 745 1178 979 1240 3061 history1 3	16 0 69 <1 881 1139 1053 1208 3216 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 3	15 0 67 <1 745 1178 979 1240 3061 history1 3 3	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	11 0 68 <1 898 1442 1165 1425 4226 current 3	15 0 67 <1 745 1178 979 1240 3061 history1 3	16 0 69 <1 881 1139 1053 1208 3216 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 2 current	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 3	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 2 0 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 current 0.5	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 history1 0.4	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 2 0 2 2 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 2 current 0.5 9.5	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 3 history1 0.4 7.4	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 0 2 history2 0.5 7.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 current 0.5	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 history1 0.4	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 2 0 2 2 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm t ppm ppm pp	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 2 current 0.5 9.5	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 3 history1 0.4 7.4	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 0 2 history2 0.5 7.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm t ppm ppm pp	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	11 0 68 <1 898 1442 1165 1425 4226 current 3 3 2 2 current 0.5 9.5 18.4	15 0 67 <1 745 1178 979 1240 3061 history1 3 3 3 3 3 history1 0.4 7.4 18.0	16 0 69 <1 881 1139 1053 1208 3216 history2 2 0 2 history2 0.5 7.9 18.7

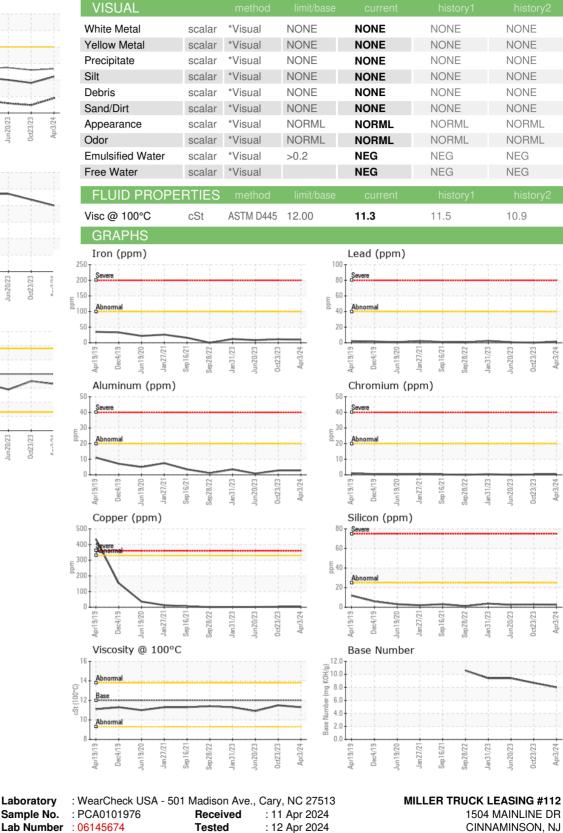


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: 12 Apr 2024 - Wes Davis

Unique Number : 10970482 Diagnosed Test Package : MOB 1 (Additional Tests: TBN)

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)

Report Id: MILPEN [WUSCAR] 06145674 (Generated: 04/12/2024 09:34:03) Rev: 1

Certificate 12367

Laboratory

Sample No.

Contact/Location: MIKE BOYER - MILPEN

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US 08077

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