

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

322690

Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 acceptable for the time in service.

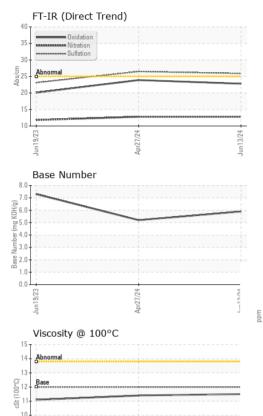
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0125179	PCA0121418	PCA0100746
Sample Date		Client Info		13 Jun 2024	27 Apr 2024	19 Jun 2023
Machine Age	mls	Client Info		77849	71633	34370
Oil Age	mls	Client Info		77849	71633	34370
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	59	61	45
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		3	4	8
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	26	27	14
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	7	7	12
Tin	ppm	ASTM D5185m	>15	2	2	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 5	history2 9
	ppm ppm					
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6	5	9
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	6 0	5	9
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 61	5 0 63	9 0 53
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 61 1	5 0 63 2	9 0 53 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	6 0 61 1 989 1327 1126	5 0 63 2 930 1266 1057	9 0 53 2 888 1342 936
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	6 0 61 1 989 1327 1126 1413	5 0 63 2 930 1266 1057 1253	9 0 53 2 888 1342 936 1239
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	6 0 61 1 989 1327 1126	5 0 63 2 930 1266 1057	9 0 53 2 888 1342 936
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm 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	6 0 61 1 989 1327 1126 1413	5 0 63 2 930 1266 1057 1253	9 0 53 2 888 1342 936 1239
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	2 0 50 950 1050 995 1180 2600	6 0 61 1 989 1327 1126 1413 3505 current 6	5 0 63 2 930 1266 1057 1253 3334 history1 6	9 0 53 2 888 1342 936 1239 3653 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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	6 0 61 1 989 1327 1126 1413 3505 current	5 0 63 2 930 1266 1057 1253 3334 history1	9 0 53 2 888 1342 936 1239 3653 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	2 0 50 0 950 1050 995 1180 2600 limit/base	6 0 61 1 989 1327 1126 1413 3505 current 6	5 0 63 2 930 1266 1057 1253 3334 history1 6	9 0 53 2 888 1342 936 1239 3653 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m 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 limit/base	6 0 61 1 989 1327 1126 1413 3505 <u>current</u> 6 6	5 0 63 2 930 1266 1057 1253 3334 history1 6 2	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 61 1 989 1327 1126 1413 3505 current 6 6 6 35	5 0 63 2 930 1266 1057 1253 3334 history1 6 2 38 history1 0.8	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2 0.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 61 1 989 1327 1126 1413 3505 current 6 6 35 25 current	5 0 63 2 930 1266 1057 1253 3334 history1 6 2 38 38 history1	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 61 1 989 1327 1126 1413 3505 current 6 6 35 current 0.8	5 0 63 2 930 1266 1057 1253 3334 history1 6 2 38 history1 0.8	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2 0.6
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 t ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	6 0 61 1 989 1327 1126 1413 3505 current 6 6 35 current 0.8 12.8	5 0 63 2 930 1266 1057 1253 3334 history1 6 2 38 kistory1 0.8 12.8	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2 0.6 11.8
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 ppm t ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	6 0 61 1 989 1327 1126 1413 3505 current 6 6 6 35 current 0.8 12.8 25.9	5 0 63 2 930 1266 1057 1253 3334 history1 6 2 38 history1 0.8 12.8 26.5	9 0 53 2 888 1342 936 1239 3653 history2 5 3 16 history2 0.6 11.8 23.1



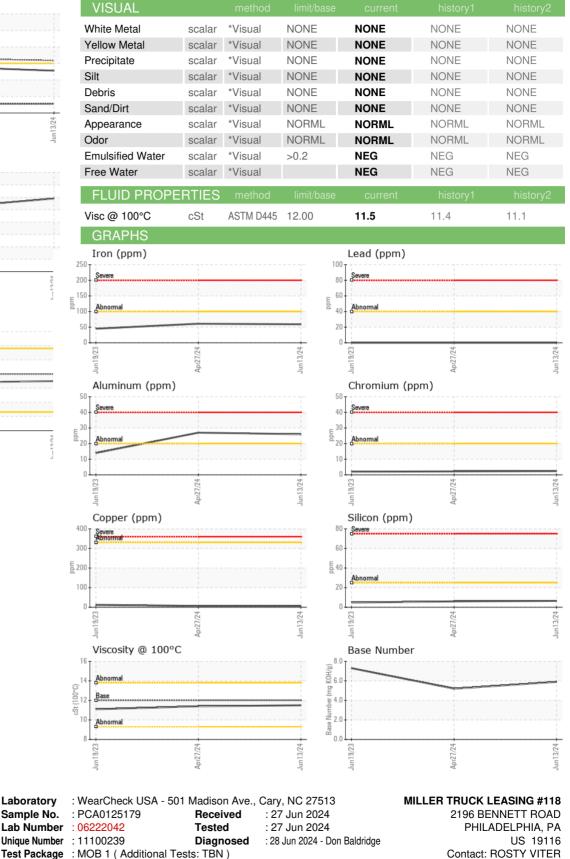
Abnorma

19/23

OIL ANALYSIS REPORT



Apr27/24



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: MILPHINE [WUSCAR] 06222042 (Generated: 06/28/2024 14:06:31) Rev: 1

Certificate 12367

Laboratory

Sample No.

Lab Number

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