

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **736796** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- QTS)**

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.

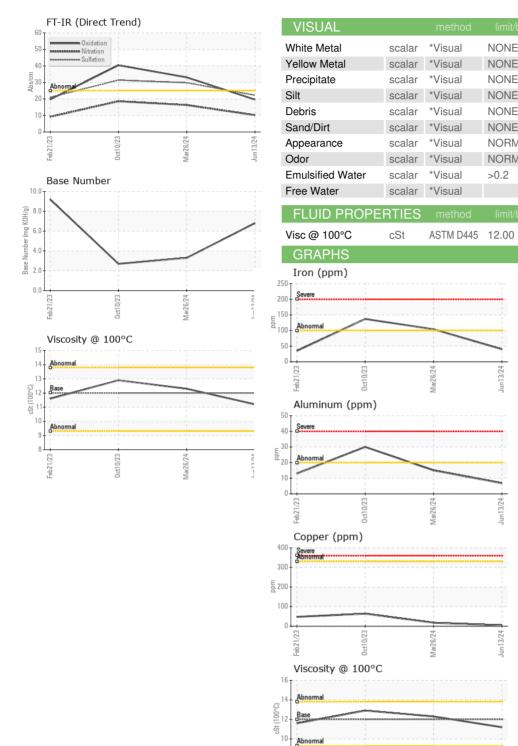
Fluid Condition

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

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0125170	PCA0121481	PCA0108331
Sample Date		Client Info		13 Jun 2024	26 Mar 2024	10 Oct 2023
Machine Age	mls	Client Info		0	380469	281903
Oil Age	mls	Client Info		24672	380469	101988
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
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	40	104	137
Chromium	ppm		>20	1	3	5
Nickel	ppm	ASTM D5185m	>4	<1	0	2
Titanium	ppm	ASTM D5185m		4	4	9
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	7	15	30
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	5	18	64
Tin	ppm	ASTM D5185m	>15	<1	2	4
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1 7	history2 4
	ppm ppm					
Boron Barium		ASTM D5185m	2	6	7	4
Boron	ppm	ASTM D5185m ASTM D5185m	2 0	6 0	7 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 60	7 0 64	4 0 59
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 60 <1	7 0 64 1	4 0 59 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	6 0 60 <1 990	7 0 64 1 955	4 0 59 2 885
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	6 0 60 <1 990 1231	7 0 64 1 955 1309	4 0 59 2 885 1391
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 60 <1 990 1231 1139	7 0 64 1 955 1309 1067	4 0 59 2 885 1391 993
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 60 <1 990 1231 1139 1401	7 0 64 1 955 1309 1067 1310	4 0 59 2 885 1391 993 1287
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 ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	6 0 60 <1 990 1231 1139 1401 3325	7 0 64 1 955 1309 1067 1310 2645 <u>history1</u> 12	4 0 59 2 885 1391 993 1287 2579 history2 19
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 60 <1 990 1231 1139 1401 3325 current	7 0 64 1 955 1309 1067 1310 2645 history1 12 2	4 0 59 2 885 1391 993 1287 2579 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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	6 0 60 <1 990 1231 1139 1401 3325 current 7	7 0 64 1 955 1309 1067 1310 2645 <u>history1</u> 12	4 0 59 2 885 1391 993 1287 2579 history2 19
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 60 <1 990 1231 1139 1401 3325 current 7 4 8 8	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 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	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25	6 0 60 <1 990 1231 1139 1401 3325 current 7 4 8 current 0.8	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1 1.9	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 history2 1.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	6 0 60 <1 990 1231 1139 1401 3325 <i>current</i> 7 4 8 <i>current</i> 0.8 10.2	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1 1.9 1.9 16.3	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 history2 1.9 1.9 1.9
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 60 <1 990 1231 1139 1401 3325 current 7 4 8 current 0.8	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1 1.9	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 history2 1.9
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 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	6 0 60 <1 990 1231 1139 1401 3325 <i>current</i> 7 4 8 <i>current</i> 0.8 10.2	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1 1.9 1.9 16.3	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 history2 1.9 1.9 1.9
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 ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20 >30	6 0 60 <1 990 1231 1139 1401 3325 current 7 4 8 current 0.8 10.2 22.2	7 0 64 1 955 1309 1067 1310 2645 history1 12 2 25 history1 1.9 16.3 29.8	4 0 59 2 885 1391 993 1287 2579 history2 19 3 68 history2 1.9 1.9 1.9 18.6 31.4

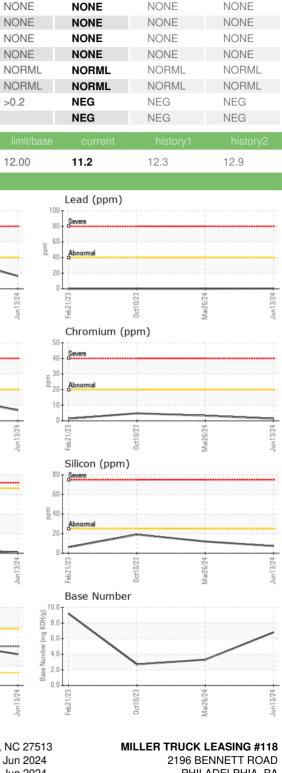


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Feb21/23



NONE

NONE

NONE

NONE

NONE

NONE

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : PCA0125170 Received : 27 Jun 2024 Lab Number : 06222039 Tested : 27 Jun 2024 PHILADELPHIA, PA Unique Number : 11100236 Diagnosed : 27 Jun 2024 - Wes Davis US 19116 Test Package : MOB 1 (Additional Tests: TBN) Contact: ROSTY VITER Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rviter@millertransgroup.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (215)552-9832 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (215)552-9892

Mar26/24

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