

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **542178** 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

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.

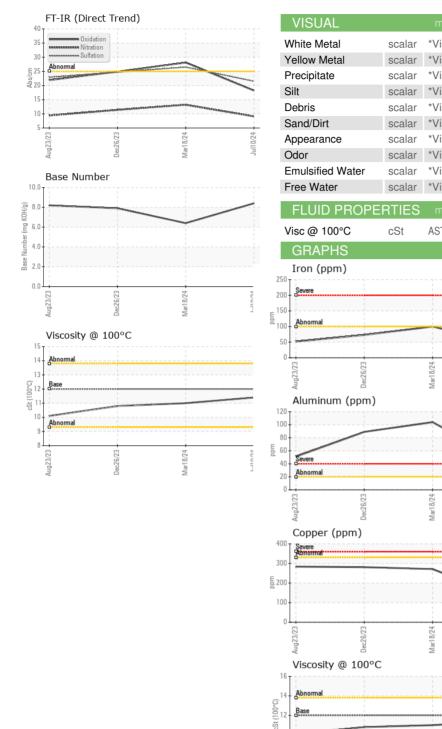
Fluid Condition

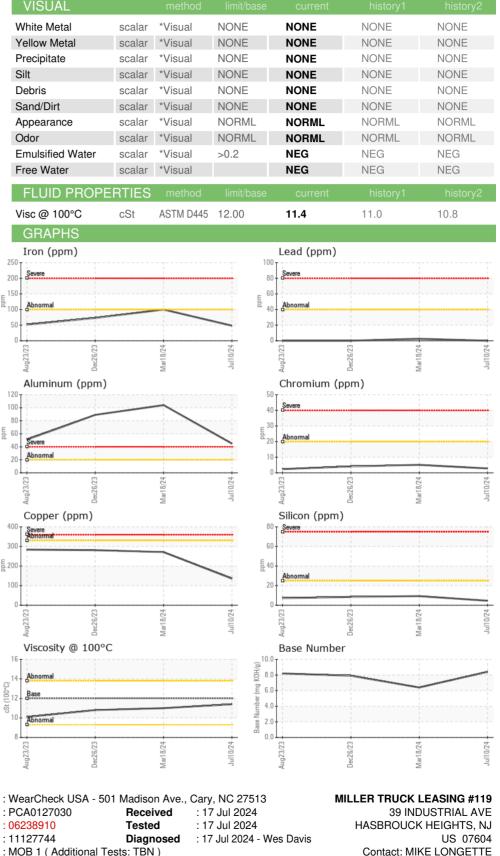
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0127030	PCA0120695	PCA0115265
Sample Date		Client Info		10 Jul 2024	18 Mar 2024	26 Dec 2023
Machine Age	mls	Client Info		61270	45596	34997
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	N/A
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	48	100	73
Chromium	ppm	ASTM D5185m	>20	3	5	4
Nickel	ppm	ASTM D5185m	>4	0	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	45	104	89
Lead	ppm	ASTM D5185m	>40	0	3	0
Copper	ppm	ASTM D5185m	>330	136	271	281
Tin	ppm	ASTM D5185m	>15	1	6	7
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 23	history2 28
	ppm ppm					
Boron		ASTM D5185m	2	6	23	28
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	6 0	23 <1	28 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 60	23 <1 49	28 0 47
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 60 2	23 <1 49 4	28 0 47 4
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 2 894	23 <1 49 4 619	28 0 47 4 605
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 2 894 1331	23 <1 49 4 619 1850	28 0 47 4 605 1694
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 2 894 1331 977	23 <1 49 4 619 1850 800	28 0 47 4 605 1694 821
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 0 950 1050 995 1180	6 0 60 2 894 1331 977 1185	23 <1 49 4 619 1850 800 967	28 0 47 4 605 1694 821 976
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 50 950 1050 995 1180 2600	6 0 60 2 894 1331 977 1185 2728	23 <1 49 4 619 1850 800 967 2282	28 0 47 4 605 1694 821 976 1898
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 2 894 1331 977 1185 2728 current	23 <1 49 4 619 1850 800 967 2282 history1	28 0 47 4 605 1694 821 976 1898 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 50 950 1050 995 1180 2600	6 0 60 2 894 1331 977 1185 2728 current 5	23 <1 49 4 619 1850 800 967 2282 history1 9	28 0 47 4 605 1694 821 976 1898 history2 8
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 2 894 1331 977 1185 2728 <u>current</u> 5 3	23 <1 49 4 619 1850 800 967 2282 history1 9 7	28 0 47 605 1694 821 976 1898 history2 8 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	6 0 60 2 894 1331 977 1185 2728 current 5 3 101	23 <1 49 4 619 1850 800 967 2282 history1 9 7 253	28 0 47 4 605 1694 821 976 1898 history2 8 5 206
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 60 2 894 1331 977 1185 2728 current 5 3 101 current	23 <1 49 4 619 1850 800 967 2282 history1 9 7 253 history1	28 0 47 605 1694 821 976 1898 history2 8 5 206 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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	6 0 60 2 894 1331 977 1185 2728 current 5 3 101 current 1	23 <1 49 4 619 1850 800 967 2282 history1 9 7 253 history1 1.8	28 0 47 4 605 1694 821 976 1898 history2 8 5 206 history2 1.4
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>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	6 0 60 2 894 1331 977 1185 2728 <i>current</i> 5 3 101 <i>current</i> 1 9.1	23 <1 49 4 619 1850 800 967 2282 history1 9 7 253 history1 1.8 1.8 13.2	28 0 47 4 605 1694 821 976 1898 history2 8 5 206 history2 1.4 1.4
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	6 0 60 2 894 1331 977 1185 2728 current 5 3 101 current 1 9.1 21.5	23 <1 49 4 619 1850 800 967 2282 history1 9 7 253 history1 1.8 13.2 26.5	28 0 47 4 605 1694 821 976 1898 history2 8 5 206 history2 1.4 1.4 11.4 24.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 >20 >30 >30 imit/base	6 0 60 2 894 1331 977 1185 2728 current 5 3 101 current 1 9.1 21.5 current	23 <1 49 4 619 1850 800 967 2282 history1 9 7 2253 history1 1.8 13.2 26.5 history1	28 0 47 4 605 1694 821 976 1898 history2 8 5 206 history2 1.4 1.4 11.4 24.7 history2



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Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 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.

: PCA0127030

Abnorma

Dec26/23

Aug23/23

Laboratory

Sample No.

Lab Number : 06238910

Unique Number : 11127744

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (201)528-7053

Contact/Location: MIKE LONGETTE - MILRUT

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