

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id **26629** 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.

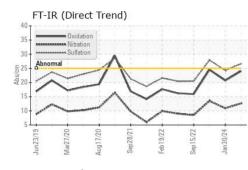
#### Fluid Condition

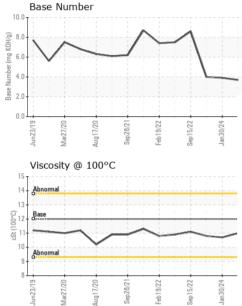
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0114786	PCA0118438	PCA0076960
Sample Date		Client Info		18 Apr 2024	30 Jan 2024	12 May 2023
Machine Age	mls	Client Info		0	0	382475
Oil Age	mls	Client Info		0	0	60000
Oil Changed		Client Info		N/A	N/A	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	98	60	80
Chromium	ppm	ASTM D5185m	>20	<1	1	2
Nickel	ppm	ASTM D5185m	>4	0	1	1
Titanium	ppm	ASTM D5185m		3	2	6
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	3
Lead	ppm	ASTM D5185m	>40	3	4	7
Copper	ppm	ASTM D5185m	>330	8	8	12
Tin	ppm	ASTM D5185m	>15	<1	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 <1
	ppm ppm					
Boron		ASTM D5185m	2	0	0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	0 0	0 13	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 59	0 13 60	<1 0 56
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 59 <1	0 13 60 1	<1 0 56 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	0 0 59 <1 935	0 13 60 1 871	<1 0 56 1 927
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	0 0 59 <1 935 1265	0 13 60 1 871 1053	<1 0 56 1 927 1179
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	0 0 59 <1 935 1265 1044	0 13 60 1 871 1053 957	<1 0 56 1 927 1179 981
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	0 0 59 <1 935 1265 1044 1319	0 13 60 1 871 1053 957 1171	<1 0 56 1 927 1179 981 1276
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 0 59 <1 935 1265 1044 1319 3069	0 13 60 1 871 1053 957 1171 2729	<1 0 56 1 927 1179 981 1276 3055
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 0 59 <1 935 1265 1044 1319 3069 current	0 13 60 1 871 1053 957 1171 2729 history1	<1 0 56 1 927 1179 981 1276 3055 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 <b>method</b>	2 0 50 950 1050 995 1180 2600 <b>limit/base</b>	0 0 59 <1 935 1265 1044 1319 3069 current 7	0 13 60 1 871 1053 957 1171 2729 history1 7	<1 0 56 1 927 1179 981 1276 3055 history2 7
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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b>	0 0 59 <1 935 1265 1044 1319 3069 current 7 21	0 13 60 1 871 1053 957 1171 2729 history1 7 11	<1 0 56 1 927 1179 981 1276 3055 history2 7 28
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 <b>limit/base</b> >25	0 0 59 <1 935 1265 1044 1319 3069 current 7 21 4	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4
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 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	0 0 59 <1 935 1265 1044 1319 3069 current 7 21 4 current	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4 history1	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	0 0 59 <1 935 1265 1044 1319 3069 <i>current</i> 7 21 4 <i>current</i>	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4 history1 1	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4 kistory2 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 0 950 1050 995 1180 2600 <b>i</b> mit/base >25 >20 <b>i</b> mit/base >3 >20	0 0 59 <1 935 1265 1044 1319 3069 <i>current</i> 7 21 4 <i>current</i> 1.3 12.6	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4 history1 1 1 10.9	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4 history2 1.4 13.5
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 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	0 0 59 <1 935 1265 1044 1319 3069 current 7 21 4 current 1.3 12.6 26.6	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4 history1 1 1 10.9 24.3	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4 history2 1.4 13.5 27.9
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 255 20 220 20 20 33 20 30 20 30 20 30	0 0 59 <1 935 1265 1044 1319 3069 <i>current</i> 7 21 4 <i>current</i> 1.3 12.6 26.6 <i>current</i>	0 13 60 1 871 1053 957 1171 2729 history1 7 11 4 history1 1 10.9 24.3 history1	<1 0 56 1 927 1179 981 1276 3055 history2 7 28 4 history2 1.4 13.5 27.9 history2



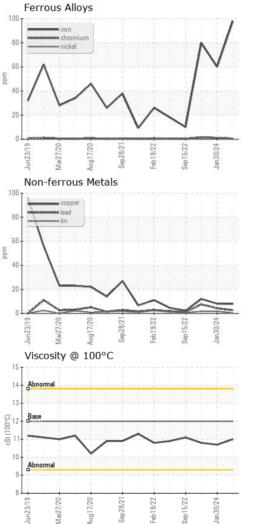
# **OIL ANALYSIS REPORT**

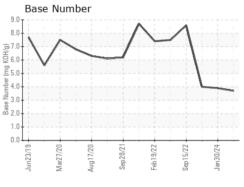




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	10.7	10.8
CDADUS						

GRAPHS





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **PERDUE FARMS - SALISBURY** Sample No. : PCA0114786 Received : 24 Apr 2024 7036 ZION CHURCH ROAD Lab Number : 06158754 Tested : 25 Apr 2024 SALISBURY, MD Unique Number : 10994177 Diagnosed : 25 Apr 2024 - Wes Davis US 21802 Test Package : FLEET Contact: RICHARD O`NEAL Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. richard.oneal@perdue.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (410)543-3628 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (410)341-2164

Report Id: PERSALMD [WUSCAR] 06158754 (Generated: 04/25/2024 15:58:39) Rev: 1

Contact/Location: RICHARD O`NEAL - PERSALMD

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