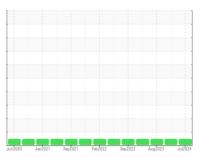


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **2026788**

Diesel Engine

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.

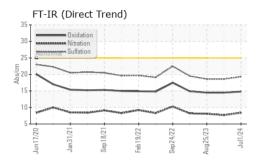
Fluid Condition

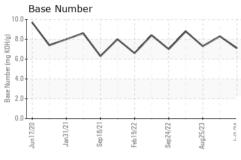
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

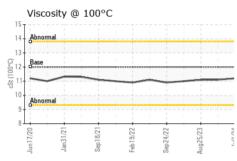
Sample Number Client Info PCA0123181 PCA0102461 PCA010117 Sample Date Client Info O1 Jul 2024 19 Nov 2023 25 Aug 2023 25 Aug 2023 26 Aug 2023 26 Aug 2023 26 Aug 2023 27 Aug 2023 27 Aug 2023 28	iAL)		Jun2020	Jan2021 Sep2021	Feb2022 Sep2022 Aug2023	Jul2024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 0 0 292932	Sample Number		Client Info		PCA0123181	PCA0102461	PCA0101177
Oil Age	Sample Date		Client Info		01 Jul 2024	19 Nov 2023	25 Aug 2023
Colient Info	Machine Age	mls	Client Info		0	0	292932
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 water WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Oil Age	mls	Client Info		0	20000	40000
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		N/A	Not Changd	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method Imitibase current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 37 27 32 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >4 <1 <1 <1 Silver ppm ASTM D5185m >4 <1 <1 <1 Silver ppm ASTM D5185m >20 2 1 4 Silver ppm ASTM D5185m >20 2 1 4 Lead ppm ASTM D5185m >40 0 <1 0 Copper ppm ASTM D5185m >15 0 <1 <1 Vanadium ppm ASTM D5185m >10 0 <	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	37	27	32
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Aluminum	Titanium	ppm	ASTM D5185m		14		1
Lead	Silver	ppm					
Copper ppm ASTM D5185m >330 6 8 5 Tin ppm ASTM D5185m >15 0 <1	Aluminum	ppm		>20	2	1	4
Tin	Lead	ppm					
Vanadium ppm ASTM 05185m 0 <1 0 Cadmium ppm ASTM 05185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 <1 2 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 51 56 69 Manganese ppm ASTM D5185m 0 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 950 859 865 1026 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Copper	ppm	ASTM D5185m	>330	6	8	5
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 <1		ppm		>15			
ADDITIVES	Vanadium	ppm			-		
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 50 51 56 69 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 51 56 69 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 859 865 1026 Calcium ppm ASTM D5185m 1050 1341 1069 1185 Phosphorus ppm ASTM D5185m 995 1016 948 1081 Zinc ppm ASTM D5185m 995 1016 948 1081 Zinc ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m 3 2 2 2 Potassium ppm ASTM D5185m >20 <1 0 0 INFRA-RED method limit/base	Boron	ppm	ASTM D5185m	2	0	<1	2
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 950 859 865 1026 Calcium ppm ASTM D5185m 1050 1341 1069 1185 Phosphorus ppm ASTM D5185m 995 1016 948 1081 Zinc ppm ASTM D5185m 1180 1199 1111 1304 Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m >20 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 950 859 865 1026 Calcium ppm ASTM D5185m 1050 1341 1069 1185 Phosphorus ppm ASTM D5185m 1016 948 1081 Zinc ppm ASTM D5185m 1180 1199 1111 1304 Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m >20 <1 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Soiffation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION *ASTM D7414 >2	Molybdenum	ppm	ASTM D5185m	50	51	56	69
Calcium ppm ASTM D5185m 1050 1341 1069 1185 Phosphorus ppm ASTM D5185m 995 1016 948 1081 Zinc ppm ASTM D5185m 1180 1199 1111 1304 Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 995 1016 948 1081 Zinc ppm ASTM D5185m 1180 1199 1111 1304 Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m >20 <1	Magnesium	ppm	ASTM D5185m	950	859	865	1026
Zinc ppm ASTM D5185m 1180 1199 1111 1304 Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 <1	Calcium	ppm	ASTM D5185m	1050	1341	1069	1185
Sulfur ppm ASTM D5185m 2600 3517 2791 3730 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m		1016		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 <1	Zinc	ppm	ASTM D5185m	1180	1199	1111	1304
Silicon ppm ASTM D5185m >25 6 3 4 Sodium ppm ASTM D5185m 3 2 2 2 Potassium ppm ASTM D5185m >20 <1 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 7.7 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5			ASTM D5185m	2600	3517	2791	3730
Sodium ppm ASTM D5185m 3 2 2 Potassium ppm ASTM D5185m >20 <1	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 7.7 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5	Silicon	ppm	ASTM D5185m	>25	6	3	4
INFRA-RED	Sodium	ppm	ASTM D5185m		3	2	2
Soot % % *ASTM D7844 >3 0.3 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 7.7 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5	Potassium	ppm	ASTM D5185m	>20	<1	0	0
Nitration Abs/cm *ASTM D7624 >20 8.4 7.7 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.3 18.6 18.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5	Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 14.5 14.5	Nitration	Abs/cm	*ASTM D7624	>20	8.4	7.7	8.1
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	18.6	18.6
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 7.1 8.3 7.3	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	14.5	14.5
	Base Number (BN)	mg KOH/g	ASTM D2896		7.1	8.3	7.3

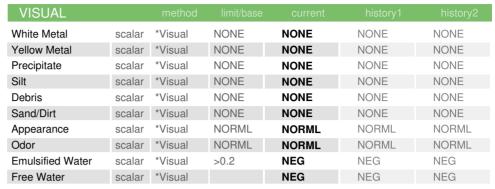


OIL ANALYSIS REPORT





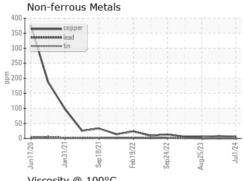


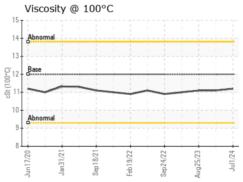


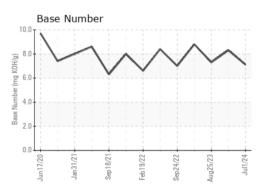
FLUID PROPI	ERHES	method				history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.2	11.1	11.1

GRAPHS

Ferrous Alloys 35 25 E 20 10











Sample No.

: PCA0123181 Lab Number : 06233120 Unique Number : 11116613

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jul 2024 **Tested** : 12 Jul 2024

Diagnosed : 12 Jul 2024 - Wes Davis

Test Package : FLEET 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.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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US 21802

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Submitted By: ?