

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (35 QTS)

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.

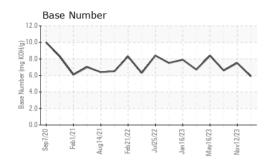
Fluid Condition

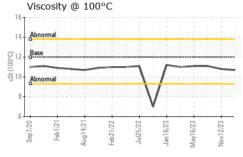
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Sep2020 Feb2	2021 Aug2021 Feb2022	Jul2022 Jan2023 May2023	Nov2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117957	PCA0112388	PCA0104348
Sample Date		Client Info		12 Feb 2024	12 Nov 2023	21 Aug 2023
Machine Age	mls	Client Info		369661	349248	328089
Oil Age	mls	Client Info		41572	21159	41907
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<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	25	34
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	1	1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	3	2	3
Lead	ppm	ASTM D5185m	>40	3	<1	2
Copper	ppm	ASTM D5185m	>330	8	6	8
Tin	ppm		>15	2	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	0	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	52	61	60
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	950	823	947	900
Calcium	ppm	ASTM D5185m	1050	1005	1047	1103
Phosphorus	ppm	ASTM D5185m	995	917	1057	987
Zinc	ppm	ASTM D5185m	1180	1078	1244	1230
Sulfur	ppm	ASTM D5185m	2600	3462	3053	2905
CONTAMINAN	TS	method	limit/base	current	history1	history2
CONTAMINAN Silicon	TS ppm		limit/base	current 5	history1 5	history2 4
				odinonia		
Silicon	ppm	ASTM D5185m		5	5	4
Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>25	5 4	5 <1	4
Silicon Sodium Potassium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	5 4 3	5 <1 3	4 1 4
Silicon Sodium Potassium INFRA-RED	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>25 >20 limit/base	5 4 3 current	5 <1 3 history1	4 1 4 history2
Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	>25 >20 limit/base >3	5 4 3 current 0.7	5 <1 3 history1 0.4	4 1 4 history2 0.6
Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >3 >20	5 4 3 current 0.7 10.1	5 <1 3 history1 0.4 8.3	4 1 4 history2 0.6 10.5
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >3 >20 >30	5 4 3 current 0.7 10.1 21.1	5 <1 3 history1 0.4 8.3 18.9	4 1 4 history2 0.6 10.5 21.3
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAU	ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415 method	>25 >20 limit/base >3 >20 >30 limit/base	5 4 3 current 0.7 10.1 21.1 current	5 <1 3 history1 0.4 8.3 18.9 history1	4 1 4 history2 0.6 10.5 21.3 history2

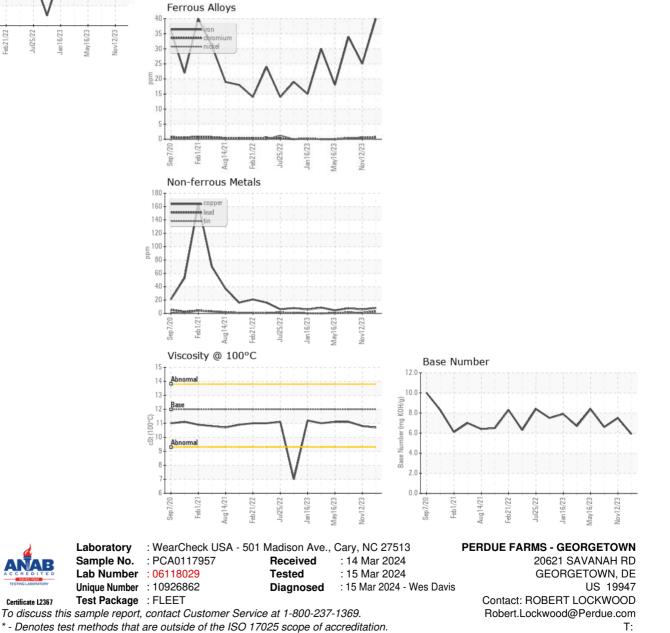


OIL ANALYSIS REPORT





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	10.7	10.8	11.1
GRAPHS						



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

Certificate L2367

F: