

OIL ANALYSIS REPORT

Sample Rating Trend





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

There is no indication of any contamination in the oil.

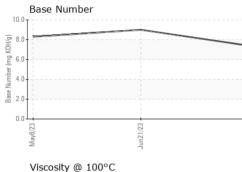
Fluid Condition

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

TS)		Ma	y2023	Jun2023 Aug202	23	
SAMPLE INFOF	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100934	PCA0100961	PCA0097804
Sample Date		Client Info		19 Aug 2023	21 Jun 2023	08 May 2023
Machine Age	mls	Client Info		31346	51377	41323
Oil Age	mls	Client Info		10000	10056	41323
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	34	117
Chromium	ppm	ASTM D5185m	>20	2	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	3	17
Lead	ppm	ASTM D5185m	>40	<1	1	5
Copper	ppm	ASTM D5185m	>330	1	26	163
Tin	ppm	ASTM D5185m	>15	<1	2	7
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	5	14
Barium	ppm	ASTM D5185m	0	0	12	7
Molybdenum		AOTH DEVOE		• •		50
	ppm	ASTM D5185m	50	61	60	50
Manganese	ppm ppm	ASTM D5185m ASTM D5185m	50 0	61 1	60 <1	3
•				-		
Magnesium	ppm	ASTM D5185m	0	1	<1	3
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	0 950	1 982	<1 870	3 616
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	1 982 1136	<1 870 1094	3 616 1309
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	1 982 1136 1057	<1 870 1094 976	3 616 1309 1079
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	1 982 1136 1057 1373	<1 870 1094 976 1244	3 616 1309 1079 1333
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	1 982 1136 1057 1373 3811	<1 870 1094 976 1244 3164	3 616 1309 1079 1333 2706
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	1 982 1136 1057 1373 3811 current	<1 870 1094 976 1244 3164 history1	3 616 1309 1079 1333 2706 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	1 982 1136 1057 1373 3811 current 9	<1 870 1094 976 1244 3164 history1 8	3 616 1309 1079 1333 2706 history2 24
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm vTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	1 982 1136 1057 1373 3811 current 9 1	<1 870 1094 976 1244 3164 history1 8 8 8	3 616 1309 1079 1333 2706 history2 24 9
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm vTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25 >20	1 982 1136 1057 1373 3811 current 9 1 12	<1 870 1094 976 1244 3164 history1 8 8	3 616 1309 1079 1333 2706 history2 24 9 7
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20	1 982 1136 1057 1373 3811 current 9 1 1 12 current	<1 870 1094 976 1244 3164 history1 8 8	3 616 1309 1079 1333 2706 history2 24 9 7 7 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	1 982 1136 1057 1373 3811 current 9 1 1 12 current 0.3	<1 870 1094 976 1244 3164 history1 8 8 8 8 -1	3 616 1309 1079 1333 2706 history2 24 9 7 7 history2 1.1
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	0 950 1050 995 1180 2600 limit/base >25 -20 limit/base >3 >20	1 982 1136 1057 1373 3811 current 9 1 12 current 0.3 9.0	<1 870 1094 976 1244 3164 history1 8 8 8 0.6 10.1	3 616 1309 1079 1333 2706 history2 24 9 7 24 9 7 <i>history2</i> 1.1 14.2
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 D7844 *ASTM D7624	0 950 1050 995 1180 2600 limit/base >25 limit/base >3 >20 >30	1 982 1136 1057 1373 3811 current 9 1 1 12 current 0.3 9.0 19.5	<1 870 1094 976 1244 3164 history1 8 8 <1 history1 0.6 10.1 21.6	3 616 1309 1079 1333 2706 history2 24 9 7 kistory2 1.1 14.2 24.2

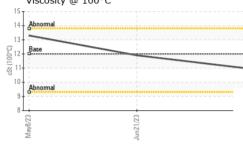


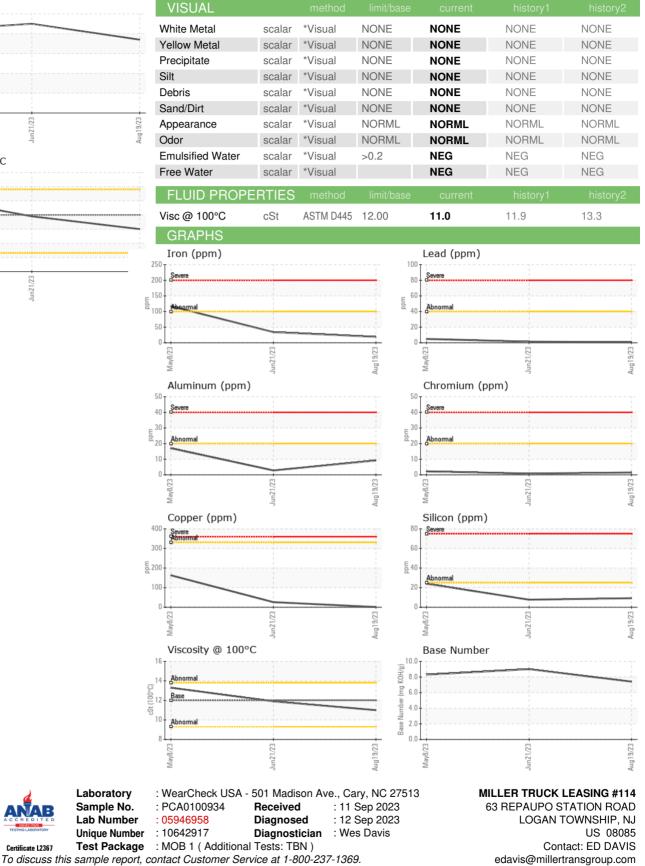
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Aug19/23

ppm





* - 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)

Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

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