

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

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.

-		Ma	2022	Dec2022 Oct202	3	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105815	PCA0082529	PCA0068475
Sample Date		Client Info		24 Oct 2023	08 Dec 2022	29 Mar 2022
Machine Age	mls	Client Info		85746	58776	36915
Oil Age	mls	Client Info		0	0	36915
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	25	31	47
Chromium	ppm	ASTM D5185m	>20	2	2	6
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	10	20	47
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	42	135	584
Tin	ppm	ASTM D5185m	>15	1	2	5
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	7	10	16
		AOTH DELOF	-	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	65	72	19
			50	-		
Molybdenum	ppm	ASTM D5185m	50	65	72	19
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	50 0	65 <1	72 1	19 4
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	65 <1 838	72 1 851	19 4 693
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	65 <1 838 1151	72 1 851 1181	19 4 693 1421
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	65 <1 838 1151 759	72 1 851 1181 945	19 4 693 1421 779
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180	65 <1 838 1151 759 1059	72 1 851 1181 945 1162	19 4 693 1421 779 866
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	50 0 950 1050 995 1180 2600 limit/base	65 <1 838 1151 759 1059 2512	72 1 851 1181 945 1162 2475	19 4 693 1421 779 866 2249
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base	65 <1 838 1151 759 1059 2512 current	72 1 851 1181 945 1162 2475 history1	19 4 693 1421 779 866 2249 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25	65 <1 838 1151 759 1059 2512 current 3	72 1 851 1181 945 1162 2475 history1 6	19 4 693 1421 779 866 2249 history2 6
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25	65 <1 838 1151 759 1059 2512 current 3 2	72 1 851 1181 945 1162 2475 history1 6 1	19 4 693 1421 779 866 2249 history2 6 7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25 >20	65 <1 838 1151 759 1059 2512 current 3 2 2 25	72 1 851 1181 945 1162 2475 history1 6 1 6	19 4 693 1421 779 866 2249 history2 6 7 130
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	65 <1 838 1151 759 1059 2512 current 3 2 25 25 current	72 1 851 1181 945 1162 2475 history1 6 1 61 61 history1	19 4 693 1421 779 866 2249 history2 6 7 130 history2
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	50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	65 <1 838 1151 759 1059 2512 current 3 2 25 25 current 0.6	72 1 851 1181 945 1162 2475 history1 6 1 61 61 history1 0.6	19 4 693 1421 779 866 2249 history2 6 7 130 history2 0.8
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	50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	65 <1 838 1151 759 1059 2512 current 3 2 25 25 current 0.6 8.4	72 1 851 1181 945 1162 2475 history1 6 1 61 history1 0.6 8.3	19 4 693 1421 779 866 2249 history2 6 7 130 history2 0.8 11.6
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	50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base >3 >20 >30 -330	65 <1 838 1151 759 2512 current 3 2 25 current 0.6 8.4 20.4	72 1 851 1181 945 1162 2475 history1 6 1 6 1 61 61 0.6 8.3 19.7	19 4 693 1421 779 866 2249 history2 6 7 130 history2 0.8 11.6 24.9

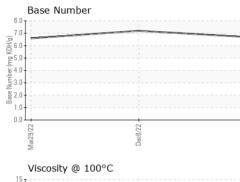


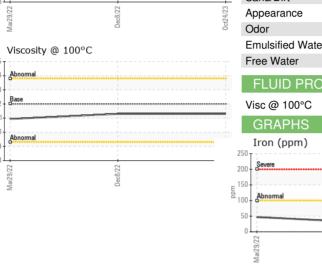
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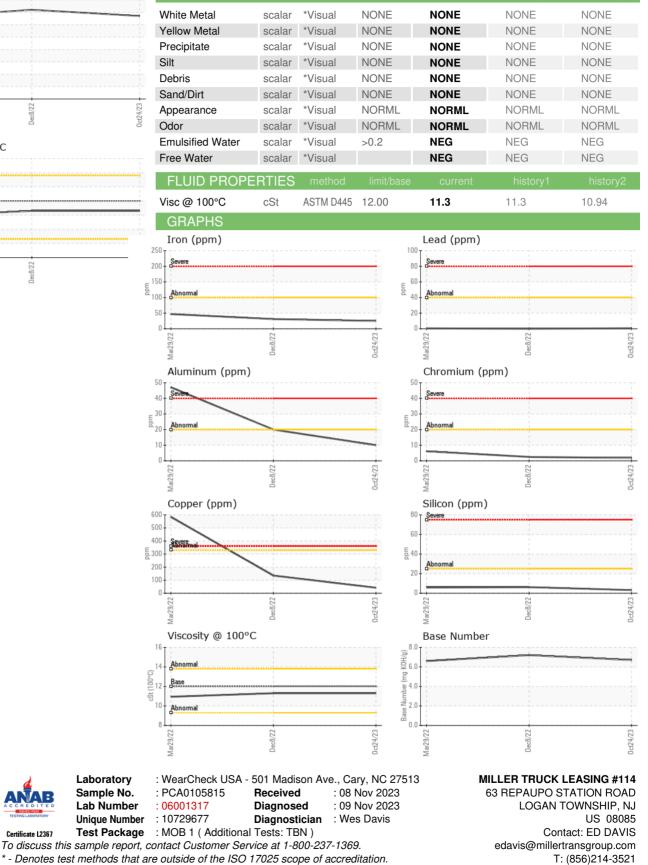
cSt (100°C)

OIL ANALYSIS REPORT

VISUAL







* - 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

F: (856)214-3663