

OIL ANALYSIS REPORT

Sample Rating Trend





Component 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

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.

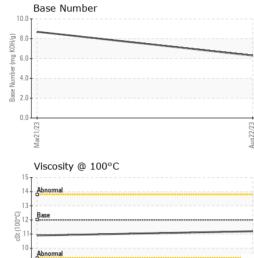
AL)		K	Mar2023	Aug2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104241	PCA0095966	
Sample Date		Client Info		22 Aug 2023	21 Mar 2023	
Machine Age	mls	Client Info		60156	47278	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	61	30	
Chromium	ppm	ASTM D5185m	>20	2	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	20	9	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	9	8	
Tin	ppm	ASTM D5185m	>15	2	<1	
Vanadium	ppm	ASTM D5185m		0	0	
					0	
Cadmium	ppm	ASTM D5185m		0	0	
Cadmium ADDITIVES		ASTM D5185m method	limit/base			 history2
			limit/base	0	0	
ADDITIVES Boron	ppm	method		0 current	0 history1	
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m	2	0 current 9	0 history1 13	history2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50	0 current 9 0	0 history1 13 0	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 current 9 0 63	0 history1 13 0 61	history2
ADDITIVES	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 current 9 0 63 2	0 history1 13 0 61 1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 current 9 0 63 2 941	0 history1 13 0 61 1 899	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 current 9 0 63 2 941 1243	0 history1 13 0 61 1 899 1220	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	0 current 9 0 63 2 941 1243 959	0 history1 13 0 61 1 899 1220 1008	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180	0 current 9 0 63 2 941 1243 959 1254	0 history1 13 0 61 1 899 1220 1008 1210	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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 current 9 0 63 2 941 1243 959 1254 3644	0 history1 13 0 61 1 899 1220 1008 1210 3348	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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 current 9 0 63 2 941 1243 959 1254 3644 current	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1	history2 -
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600	0 current 9 0 63 2 941 1243 959 1254 3644 current 8	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2 28	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2 14	history2 history2 history2
ADDITIVES 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	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2 28 current	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2 14 history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2 28 current 0.9	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2 14 14 history1 0.4	history2 history2 history2 history2 history2 history2
ADDITIVES 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	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i>	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2 28 current 0.9 12.1	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2 14 14 history1 0.4 9.6	history2 history2 history2 history2 history2
ADDITIVES 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	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	0 current 9 0 63 2 941 1243 959 1254 3644 current 8 2 28 current 0.9 12.1 24.2	0 history1 13 0 61 1 899 1220 1008 1210 3348 history1 13 2 14 13 2 14 0.4 9.6 18.8	history2 history2 history2 history2



Mar21

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Certificate L2367

Laboratory

Sample No.