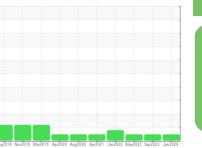


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend





NORMAL

FREIGHTLINER 483545 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (18 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

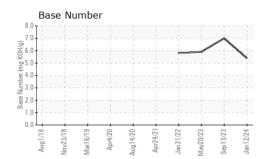
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

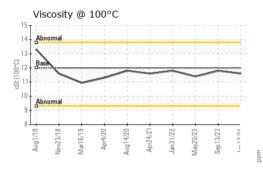
SAMPLE INFOR		methoa	limit/base	current	nistory i	nistory2
Sample Number		Client Info		PCA0113586	PCA0105786	PCA0097767
Sample Date		Client Info		12 Jan 2024	13 Sep 2023	20 May 2023
Machine Age	mls	Client Info		236067	222678	200730
Oil Age	mls	Client Info		13389	13748	10000
Oil Changed	11110	Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Sample Status				NORMAL	NORMAL	NORIVIAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	C	mathad	limit/booo	ourropt	biotonut	history
		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>130	51	52	45
Chromium	ppm	ASTM D5185m	>10	2	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	5
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>125	0	2	1
Tin	ppm	ASTM D5185m	>4	0	0	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
			limit/base			history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 7	history1 13	history2 14
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 7 0	history1 13 0	history2 14 2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 7 0 73	history1 13 0 72	history2 14 2 76
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 7 0 73 0	history1 13 0 72 0	history2 14 2 76 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 7 0 73 0 1068	history1 13 0 72 0 846	history2 14 2 76 <1 848
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current 7 0 73 0 1068 1442	history1 13 0 72 0 846 1378	history2 14 2 76 <1 848 1224
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	current 7 0 73 0 1068 1442 1169	history1 13 0 72 0 846 1378 1080	history2 14 2 76 <1 848 1224 1002
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	current 7 0 73 0 1068 1442 1169 1526	history1 13 0 72 0 846 1378 1080 1363	history2 14 2 76 <1 848 1224 1002 1212
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	Current 7 0 73 0 1068 1442 1169 1526 3907	history1 13 0 72 0 846 1378 1080 1363 3246	history2 14 2 76 <1 848 1224 1002 1212 2904
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	current 7 0 73 0 1068 1442 1169 1526	history1 13 0 72 0 846 1378 1080 1363	history2 14 2 76 <1 848 1224 1002 1212
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	Current 7 0 73 0 1068 1442 1169 1526 3907	history1 13 0 72 0 846 1378 1080 1363 3246	history2 14 2 76 <1 848 1224 1002 1212 2904
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	current 7 0 73 0 1068 1442 1169 1526 3907 current	history1 13 0 72 0 846 1378 1080 1363 3246 history1	history2 14 2 76 <1 848 1224 1002 1212 2904 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	2 0 50 950 1050 995 1180 2600	current 7 0 73 0 1068 1442 1169 1526 3907 current 3	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1	history2 14 2 76 <1
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 TS	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 -20 imit/base	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1 current	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1 7 history1	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4 0 6 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 imit/base >25 >20 imit/base >6	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1 current 0	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1 7 history1 1	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4 0 6 history2 0.8
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 ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 20 <i>limit/base</i> >20	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1 current 0.7 14.0	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1 7 history1 1 1.4.8	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4 0 6 history2 0.8 13.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 method	2 0 50 0 950 1050 995 1180 2600 255 20 >20 imit/base >6 >20 >30 imit/base	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1 current 0.7 14.0 24.5 current	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <11	history2 14 2 76 <1
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 ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >6 >20	current 7 0 73 0 1068 1442 1169 1526 3907 current 3 2 1 current 0.7 14.0 24.5	history1 13 0 72 0 846 1378 1080 1363 3246 history1 6 <1 7 history1 1 14.8 26.6	history2 14 2 76 <1 848 1224 1002 1212 2904 history2 4 0 6 history2 0.8 13.3 24.7

Contact/Location: ED DAVIS - MILLOG



OIL ANALYSIS REPORT







Certificate L2367

Laboratory

Sample No.