

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

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.

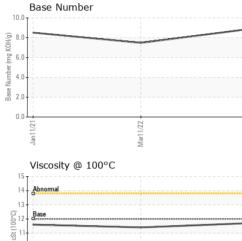
				Mar2022 Aug20		histow.0
SAMPLE INFORI	VIATION		limit/base	current	history1	history2
Sample Number		Client Info		PCA0078378	WC0594418	PCA0018473
Sample Date		Client Info		16 Aug 2023	11 Mar 2022	11 Jan 2021
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	>200	14	16	12
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>30	7	10	1
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m	>30	5	3	6
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadimum	ppm	AO INI DO IOSIII		U	0	0
ADDITIVES	ppm	method	limit/base	current	history1	history2
	ppm		limit/base 2			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 2	history1 9	history2 6
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 2 2	history1 9 0	history2 6 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 2 2 68	history1 9 0 65	history2 6 0 63
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 2 2 68 <1	history1 9 0 65 <1	history2 6 0 63 <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 2 2 68 <1 1048	history1 9 0 65 <1 1008	history2 6 0 63 <1 922
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	2 0 50 0 950 1050	Current 2 2 68 <1 1048 1212	history1 9 0 65 <1 1008 1235	history2 6 0 63 <1 922 1108
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 2 2 68 <1 1048 1212 1111	history1 9 0 65 <1 1008 1235 1090	history2 6 0 63 <1 922 1108 1006
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180	current 2 2 68 <1 1048 1212 1111 1398	history1 9 0 65 <1 1008 1235 1090 1346	history2 6 0 63 <1 922 1108 1006 1218
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 2 2 68 <1 1048 1212 1111 1398 3453	history1 9 0 65 <1 1008 1235 1090 1346 2859	history2 6 0 63 <1 922 1108 1006 1218 2314
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	Current 2 2 68 <1 1048 1212 1111 1398 3453 Current	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1	history2 6 0 63 <1 922 1108 1006 1218 2314 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Chosphorus 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 limit/base >30	current 2 2 68 <1 1048 1212 1111 1398 3453 current 6	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2
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 >30	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sidium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >30	current 2 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4
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 >30 -20 Imit/base	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2 current	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4 history1	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc 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 >30 20 limit/base	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2 current 0.6	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4 history1 0.5	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4 history2 0.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >30 20 <i>imit/base</i> >3 >20	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2 current 0.6 8.6	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4 history1 0.5 8.0	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4 history2 0.6 8.9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method ASTM D5185m ASTM D7185M ASTM D7624 *ASTM D7415 method	2 0 50 0 950 1050 995 1180 2600 imit/base >30 >20 >30 >20 >30 >30 >30	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2 current 0.6 8.6 20.2 current	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4 history1 0.5 8.0 18.6 history1	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4 history2 0.6 8.9 20.4 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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >30 >20 >30 >20 >30 >30 >30	current 2 68 <1 1048 1212 1111 1398 3453 current 6 3 2 current 0.6 8.6 20.2	history1 9 0 65 <1 1008 1235 1090 1346 2859 history1 3 <1 4 history1 0.5 8.0 18.6	history2 6 0 63 <1 922 1108 1006 1218 2314 history2 2 0 4 history2 0.6 8.9 20.4



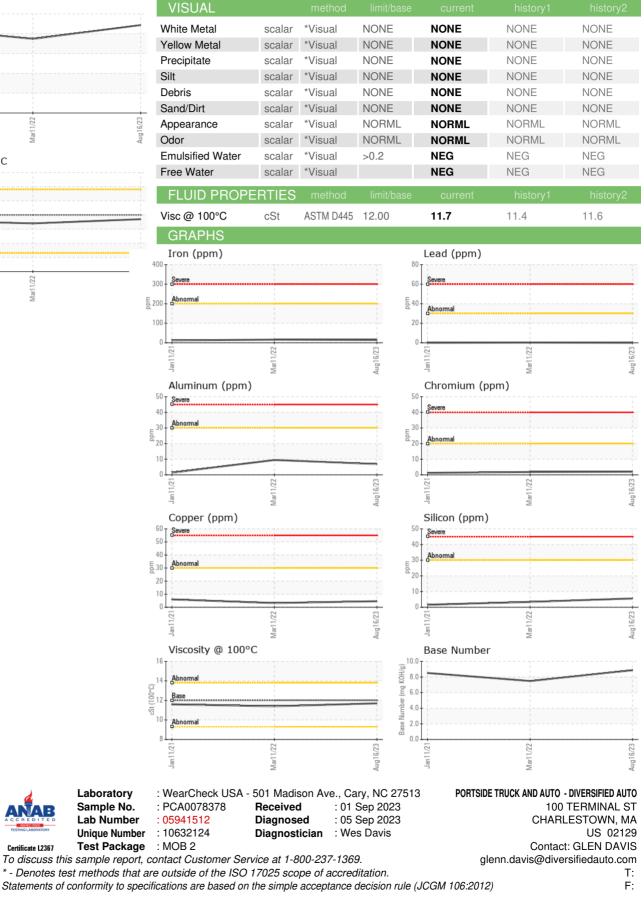
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Jan 1

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Mar11/22



Certificate L2367

Submitted By: MATTHEW PETROSINO