

OIL ANALYSIS REPORT

MCGINN BUS COMPANY 11425 Component

Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

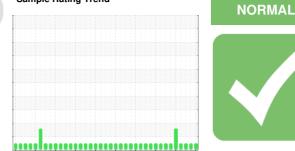
All component wear rates are normal.

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.

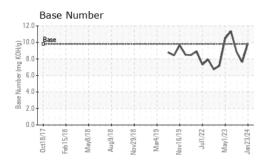


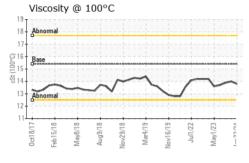
Sample Rating Trend

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0090533	PCA0104411	PCA0104407
Sample Date		Client Info		23 Jan 2024	06 Dec 2023	07 Oct 2023
Machine Age	mls	Client Info		540907	529549	518180
Oil Age	mls	Client Info		24000	24000	12000
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
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	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	15	26	12
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	3	<1
Lead	ppm	ASTM D5185m	>40	0	6	1
Copper	ppm	ASTM D5185m	>330	2	3	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	6	5
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m		3 0	6 0	5 0
Barium	ppm	ASTM D5185m	0 60	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	0 62	0 68	0 59
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 62 0	0 68 0	0 59 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 62 0 986	0 68 0 1062	0 59 0 955
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 62 0 986 1129	0 68 0 1062 1166	0 59 0 955 1087
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 62 0 986 1129 1078	0 68 0 1062 1166 1120	0 59 0 955 1087 996
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	0 62 0 986 1129 1078 1230	0 68 0 1062 1166 1120 1351	0 59 0 955 1087 996 1241
Barium 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 ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	0 62 0 986 1129 1078 1230 3430	0 68 0 1062 1166 1120 1351 3421	0 59 0 955 1087 996 1241 2814
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	0 62 0 986 1129 1078 1230 3430 current	0 68 0 1062 1166 1120 1351 3421 history1	0 59 0 955 1087 996 1241 2814 kistory2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	0 62 0 986 1129 1078 1230 3430 current 5	0 68 0 1062 1166 1120 1351 3421 history1 8	0 59 0 955 1087 996 1241 2814 2814 history2 9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 62 0 986 1129 1078 1230 3430 current 5 3	0 68 0 1062 1166 1120 1351 3421 history1 8 0	0 59 0 955 1087 996 1241 2814 2814 history2 9 3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	0 62 0 986 1129 1078 1230 3430 <u>current</u> 5 3 0	0 68 0 1062 1166 1120 1351 3421 history1 8 0 1	0 59 0 955 1087 996 1241 2814 <u>history2</u> 9 3 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20	0 62 0 986 1129 1078 1230 3430 current 5 3 0 0	0 68 0 1062 1166 1120 1351 3421 history1 8 0 1 1 history1	0 59 0 955 1087 996 1241 2814 history2 9 3 <1 }
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i>	0 62 0 986 1129 1078 1230 3430 <u>current</u> 5 3 0 0 <u>current</u> 0.5	0 68 0 1062 1166 1120 1351 3421 history1 8 0 1 1 history1 0.6	0 59 0 955 1087 996 1241 2814 history2 9 3 <1 history2 0.4
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	ASTM D5185m ASTM D7844 *ASTM D7624	0 60 0 1010 1070 1150 1270 2060 imit/base >25 >20 imit/base >20	0 62 0 986 1129 1078 1230 3430 <u>current</u> 5 3 0 0 <u>current</u> 0.5 10.3	0 68 0 1062 1166 1120 1351 3421 <u>history1</u> 8 0 1 1 <u>history1</u> 0.6 11.1	0 59 0 955 1087 996 1241 2814 <u>history2</u> 9 3 <1 <u>history2</u> 0.4 9.6
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	ASTM D5185m ASTM D7844 *ASTM D7624	0 60 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >6 >20 >30	0 62 0 986 1129 1078 1230 3430 <u>current</u> 5 3 3 0 <u>current</u> 0.5 10.3 21.5	0 68 0 1062 1166 1120 1351 3421 history1 8 0 1 1 history1 0.6 11.1 23.9	0 59 0 955 1087 996 1241 2814 history2 9 3 <1 9 3 <1 history2 0.4 9.6 21.2
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624	0 60 1010 1070 1150 1270 2060 Imit/base >25 -20 Imit/base >20 >30 Imit/base	0 62 0 986 1129 1078 1230 3430 <u>current</u> 5 3 3 0 <u>current</u> 0.5 10.3 21.5 <u>current</u>	0 68 0 1062 1166 1120 1351 3421 history1 8 0 1 1 history1 0.6 11.1 23.9 history1	0 59 0 955 1087 996 1241 2814 history2 9 3 <1 history2 0.4 9.6 21.2 history2



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Certificate L2367

Laboratory

Sample No.

Lab Number

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