

OIL ANALYSIS REPORT

Area (DXE795) Machine Id 10590 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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 INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0068907	GFL0097152	GFL0097143
Sample Date		Client Info		01 Mar 2024	22 Dec 2023	05 Dec 2023
Machine Age	hrs	Client Info		17907	17557	17435
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				MARGINAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	maa	ASTM D5185m	>100	16	16	13
Chromium	mag	ASTM D5185m	>20	<1	<1	<1
Nickel	maa	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	2	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	Method ASTM D5185m	limit/base	current 2	history1 4	history2 3
ADDITIVES Boron Barium	ppm ppm	Method ASTM D5185m ASTM D5185m	limit/base 0 0	current 2 0	history1 4 0	history2 3 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60	current 2 0 54	history1 4 0 54	history2 3 0 53
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0	2 0 54 <1	history1 4 0 54 <1	history2 3 0 53 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010	2 0 54 <1 869	history1 4 0 54 <1 875	history2 3 0 53 <1 863
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070	2 0 54 <1 869 969	history1 4 0 54 <1 875 918	history2 3 0 53 <1 863 940
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150	Current 2 0 54 <1 869 969 918	history1 4 0 54 <1 875 918 975	history2 3 0 53 <1 863 940 946
ADDITIVES Boron 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 ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270	Current 2 0 54 <1 869 969 918 1091	history1 4 0 54 <1 875 918 975 1217	history2 3 0 53 <1 863 940 946 1172
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060	current 2 0 54 <1 869 969 918 1091 2757	history1 4 0 54 <1 875 918 975 1217 2747	history2 3 0 53 <1 863 940 946 1172 2782
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	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base	current 2 0 54 <1 869 969 918 1091 2757 current	history1 4 0 54 <1 875 918 975 1217 2747 history1	history2 3 0 53 <1 863 940 946 1172 2782 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	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 2 0 54 <1 869 969 918 1091 2757 current 8	history1 4 0 54 <1 875 918 975 1217 2747 history1 6	history2 3 0 53 <1 863 940 946 1172 2782 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 2 0 54 <1 869 969 918 1091 2757 current 8 5	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm	methodASTM D5185mASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	methodASTM D5185mASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	Current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 3 <1.0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 20 >5	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9 current	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 3 <1.0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm i ppm i	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5 limit/base >3	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9 current 0.6	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1 0.7	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3 <1.0 history2 0.6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 20 >5 limit/base >3 >20	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9 current 0.6 9.2	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1 0.7 9.3	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3 <1.0 history2 0.6 8.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5 limit/base >3 >20 >30	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 & 4.9 current 0.6 9.2 18.8	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1 0.7 9.3 18.8	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3 <1.0 history2 0.6 8.4 18.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 0 0 60 0 1010 1070 1150 1270 2060 2060 2060 225 200 >55 20 >5 20 33 >20 >30	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9 current 0.6 9.2 18.8	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1 0.7 9.3 18.8 history1	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3 <1.0 history2 0.6 8.4 18.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7415 method *ASTM D7414	limit/base 0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >5 limit/base >3 >20 >30 limit/base >25	current 2 0 54 <1 869 969 918 1091 2757 current 8 5 1 4.9 current 0.6 9.2 18.8 current	history1 4 0 54 <1 875 918 975 1217 2747 history1 6 8 7 <1.0 history1 0.7 9.3 18.8 history1 15.8	history2 3 0 53 <1 863 940 946 1172 2782 history2 6 6 6 3 <1.0 history2 0.6 8.4 18.4 history2 14.8



OIL ANALYSIS REPORT





Apr11/22

Mar7/23

Mav31/18

or16/19

Jun 19/23 -

0ct6/23

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FI UID PROPE	RTIES	method	limit/base	current	historv1	historv2
					10.0	10.1
Visc @ 100°C	cSt	ASTM D445	15.4	12.4	12.9	13.1
GRAPHS						

Ferrous Alloys

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 Unique Number
 : 10914542
 Diagnosed
 : 11 Mar 2024 - Wes Davis

 Certificate L2367
 Test Package
 : FLEET (Additional Tests: FuelDilution, PercentFuel)
 Co

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - 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)

Environmental - 073 - Warner Robins - Transwaste 155 Story Road Warner Robins, GA US 31093 Contact: JOSH MALONEY jmaloney@gflenv.com T: 1 106:2012) F:

Page 2 of 2