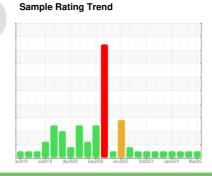


OIL ANALYSIS REPORT

(01KJ9A) 723023-361636

Component Diesel Engine

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





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

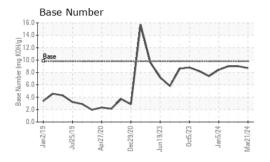
Fluid Condition

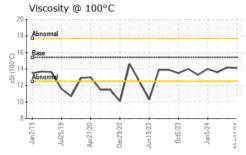
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0114045	GFL0109797	GFL0109857
Sample Date		Client Info		21 Mar 2024	28 Feb 2024	06 Feb 2024
Machine Age	hrs	Client Info		25609	25483	25349
Oil Age	hrs	Client Info		0	600	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	and the sale	Part II II and		la ta base and	history O
	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	<1	14	13
Chromium	ppm	ASTM D5185m	>20	0	1	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	3	1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2
	ppm					
Boron		ASTM D5185m	0	6	8	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	6 0	8	10
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	6 0 58	8 0 53	10 0 61
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	6 0 58 0	8 0 53 <1	10 0 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	6 0 58 0 968	8 0 53 <1 796	10 0 61 <1 887
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	6 0 58 0 968 1162	8 0 53 <1 796 1035	10 0 61 <1 887 1166
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	6 0 58 0 968 1162 1066	8 0 53 <1 796 1035 905	10 0 61 <1 887 1166 984
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270	6 0 58 0 968 1162 1066	8 0 53 <1 796 1035 905 1140	10 0 61 <1 887 1166 984 1210
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 ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 0 58 0 968 1162 1066 1262 3786	8 0 53 <1 796 1035 905 1140 2678	10 0 61 <1 887 1166 984 1210 3002
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 0 58 0 968 1162 1066 1262 3786	8 0 53 <1 796 1035 905 1140 2678 history1	10 0 61 <1 887 1166 984 1210 3002 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	6 0 58 0 968 1162 1066 1262 3786 current	8 0 53 <1 796 1035 905 1140 2678 history1 4	10 0 61 <1 887 1166 984 1210 3002 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	6 0 58 0 968 1162 1066 1262 3786 current 2	8 0 53 <1 796 1035 905 1140 2678 history1 4 24	10 0 61 <1 887 1166 984 1210 3002 history2 5
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	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2
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	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1 1.6	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2 0.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1 1.6 9.0	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2 0.9 7.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0 current 0.1 4.7 17.4	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1 1.6 9.0 21.8	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2 0.9 7.2 20.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0 current 0.1 4.7 17.4	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1 1.6 9.0 21.8 history1	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2 0.9 7.2 20.1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	6 0 58 0 968 1162 1066 1262 3786 current 2 <1 0 current 0.1 4.7 17.4	8 0 53 <1 796 1035 905 1140 2678 history1 4 24 1 history1 1.6 9.0 21.8	10 0 61 <1 887 1166 984 1210 3002 history2 5 19 2 history2 0.9 7.2 20.1



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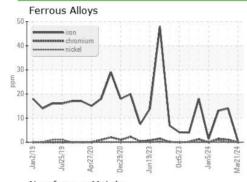


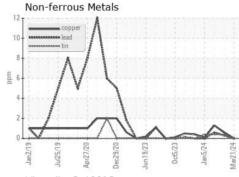


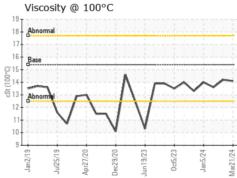
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

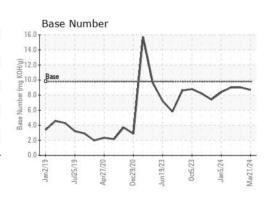
FLUID PROPE	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.2	13.6

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number : 06127388

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0114045 Unique Number: 10941539

Received **Tested** Diagnosed

: 25 Mar 2024 : 26 Mar 2024

: 26 Mar 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS

22820 S State Route 291 Harrisonville, MO

US 64701

Contact: JOHNNY PEREZ johnny.perez@gflenv.com

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)

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