

OIL ANALYSIS REPORT

(ECY338) **AUTOCAR 3742** Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (10 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.





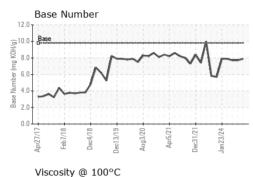
NORMAL

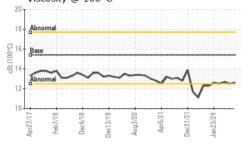
Sample Rating Trend

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		GFL0116734	GFL0109030	GFL0109043		
Sample Date		Client Info		19 Mar 2024	29 Feb 2024	22 Feb 2024		
Machine Age	hrs	Client Info		18808	18630	18589		
Oil Age	hrs	Client Info		3066	2888	18589		
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		
Water		WC Method	>0.2	NEG	NEG	NEG		
Glycol		WC Method		NEG	NEG	NEG		
WEAR METALS method limit/base current history1 history2								
Iron	ppm	ASTM D5185m	>165	9	23	26		
Chromium	ppm	ASTM D5185m	>5	<1	1	3		
Nickel	ppm	ASTM D5185m	>4	0	0	<1		
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	>150	0	0	<1		
Copper	ppm	ASTM D5185m	>90	4	1	2		
Tin	ppm	ASTM D5185m	>5	0	0	<1		
Vanadium	ppm	ASTM D5185m		0	<1	<1		
Cadmium	nnm	ASTM D5185m		0	0	<1		
Caumum	ppm	ASTIVI DSTOSIII		U	0	< 1		
ADDITIVES	ppin	method	limit/base	current	0 history1	history2		
	ppm		limit/base	-	-			
ADDITIVES		method	0	current	history1	history2		
ADDITIVES Boron	ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 8	history1 8	history2 13		
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 8 0	history1 8 0	history2 13 1		
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 8 0 59	history1 8 0 54	history2 13 1 57		
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 8 0 59 0	history1 8 0 54 0	history2 13 1 57 <1		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 8 0 59 0 864	history1 8 0 54 0 702	history2 13 1 57 <1 686		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current 8 0 59 0 864 1193	history1 8 0 54 0 702 1122	history2 13 1 57 <1 686 1020		
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	0 0 60 0 1010 1070 1150	Current 8 0 59 0 864 1193 1028	history1 8 0 54 0 702 1122 636	history2 13 1 57 <1 686 1020 892		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current 8 0 59 0 864 1193 1028 1199	history1 8 0 54 0 702 1122 636 1125	history2 13 1 57 <1 686 1020 892 1072		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 8 0 59 0 864 1193 1028 1199 3656	history1 8 0 54 0 702 1122 636 1125 2648 history1 3	history2 13 1 57 <1 686 1020 892 1072 3066		
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	0 0 60 1010 1070 1150 1270 2060 limit/base	current 8 0 59 0 864 1193 1028 1199 3656 current	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base	current 8 0 59 0 864 1193 1028 1199 3656 current 4	history1 8 0 54 0 702 1122 636 1125 2648 history1 3	history2 13 1 57 <1 686 1020 892 1072 3066 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	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >35	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >35	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2 0	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4 3	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3 2		
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 ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >35 ->20 limit/base	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2 0 current	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4 3 history1	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3 2 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	0 0 0 1010 1070 1150 1270 2060 imit/base >35 >20 imit/base >7.5	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2 0 current 0 current 0.4	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4 3 history1 1	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3 2 history2 0.9		
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 TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >35 20 imit/base >20	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2 0 current 0 current 0.4 7.0	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4 3 history1 1 7.8	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3 2 history2 0.9 7.3		
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 TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >35 >20 imit/base >7.5 >20	current 8 0 59 0 864 1193 1028 1199 3656 current 4 2 0 current 0.4 7.0 18.0	history1 8 0 54 0 702 1122 636 1125 2648 history1 3 4 3 history1 1 7.8 18.9	history2 13 1 57 <1 686 1020 892 1072 3066 history2 6 3 2 history2 0.9 7.3 18.9		

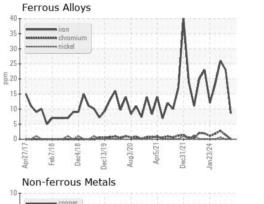


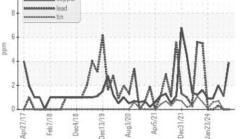
OIL ANALYSIS REPORT





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	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	12.5	12.7
GRAPHS						





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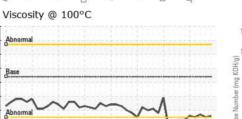
16

12

11 10

Apr27/17 Feb7/18

cSt (100°C)



Aug3/20

Jec4/18 Dec13/19 Apr5/21

Received

Diagnosed

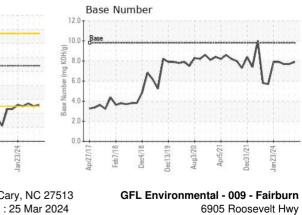
Tested

Jec31/21

Jan 23/24

: 26 Mar 2024

: 26 Mar 2024 - Wes Davis



: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Laboratory Sample No. : GFL0116734 Lab Number : 06127601 Unique Number : 10941752 Test Package : FLEET Certificate L2367 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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