

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 525144- SW7530 FREIGHTLINER CASCADIA 125 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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.

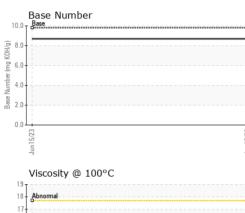
				Jun2023		
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0066572		
Sample Date		Client Info		15 Jun 2023		
Machine Age	mls	Client Info		318351		
Oil Age	mls	Client Info		600		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS	3	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	21		
Chromium	ppm	ASTM D5185m	>5	2		
Nickel	ppm	ASTM D5185m	>2	1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m		6		
Lead	ppm	ASTM D5185m	>30	0		
Copper	ppm	ASTM D5185m	>150	3		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
	maa		limit/base		history1	history2
Boron	ppm mag	ASTM D5185m	0	<1	history1 	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	<1 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	<1 0 60		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	<1 0 60 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	<1 0 60 <1 988		
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	<1 0 60 <1 988 1054		
Boron 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 0 60 0 1010 1070 1150	<1 0 60 <1 988 1054 1085	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	<1 0 60 <1 988 1054	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	<1 0 60 <1 988 1054 1085 1349	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	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 0 60 0 1010 1070 1150 1270 2060	<1 0 60 <1 988 1054 1085 1349 3220		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	<1 0 60 <1 988 1054 1085 1349 3220 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 60 1010 1070 1150 1270 2060	<1 0 60 <1 988 1054 1085 1349 3220 current 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 >20 >20 >20 >5 S	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 >20 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current 1.1	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 >20 >20 >20 >5 S	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 >20 >20 20 20 20 20 20 20 20 20 20 20 20 20 2	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current 1.1 1.1 11.2	 history1 history1 	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844	0 0 0 1010 1070 1150 1270 2060 imit/base >20 >20 >20 >3 3 20 330 30 imit/base	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current 1.1 11.2 25.2 current	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 >20 >20 >20 >20 >20 >3 >3 >20 >3 >20 >3 >20	<1 0 60 <1 988 1054 1085 1349 3220 current 5 2 3 <1.0 current 1.1 11.2 25.2	 history1 history1 history1 history1	 history2 history2 history2 history2



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White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Fluid PROPE Visc @ 100°C GRAPHS Ferrous Alloys	cSt	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual trisual tris		NONE NONE NONE NONE NORML NORML NEG NEG 15.7		 history2
Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 100°C GRAPHS Ferrous Alloys 25 0 10 5 0 0 0 0 0 0 0 0 0 0 0 0 0	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual t Method	NONE NONE NORML NORML >0.2 limit/base 15.4	NONE NONE NONE NORML NORML NEG NEG	 history1	
Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water Visc @ 100°C GRAPHS Ferrous Alloys	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual Method ASTM D445	NONE NONE NORML NORML >0.2 limit/base 15.4	NONE NONE NORML NORML NEG NEG current	 history1	
Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water Free Water Visc @ 100°C GRAPHS Ferrous Alloys	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual Method ASTM D445	NONE NORML NORML >0.2 limit/base 15.4	NONE NORML NORML NEG NEG current	 history1	
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FLUID PROPE Visc @ 100°C GRAPHS Ferrous Alloys	cSt	method ASTM D445	15.4	current		 history2
Visc @ 100°C GRAPHS Ferrous Alloys	cSt	ASTM D445	15.4			history2
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	: WearCheck USA - : GFL0066572 r : 06049791	: WearCheck USA - 501 Madis : GFL0066572 Recieved r : 06049791 Diagnose	Abnormal Abnormal 24 11 12 12	Image: Second state	: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0066572 r : 06049791 Diagnosed : 04 Jan 2024 er : 10815740 Diagnostician : Jonathan Hester	: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0066572 Recieved : 03 Jan 2024 r : 06049791 Diagnosed : 04 Jan 2024 er : 10815740 Diagnostician : Jonathan Hester

Submitted By: Mauricio Bernabe

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