

## **OIL ANALYSIS REPORT**

# Area [62523] **VOLVO VNL760 4660**

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- GAL)

#### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

### Wear

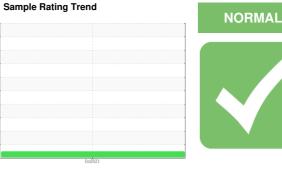
Metal levels are typical for a new component breaking in.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.





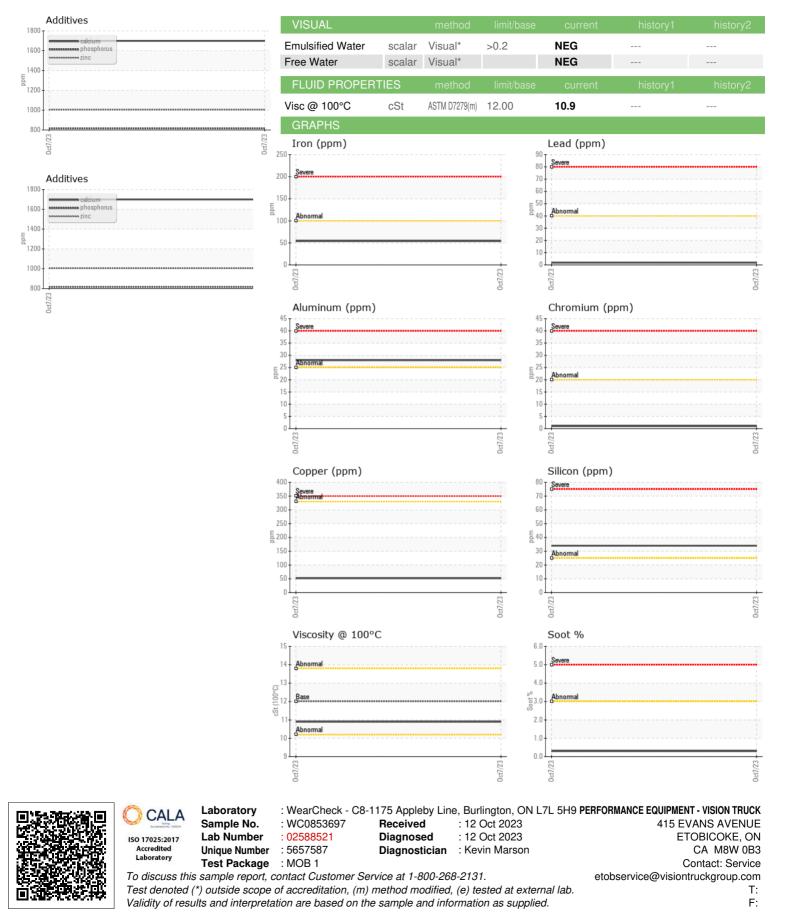
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853697		
Sample Date		Client Info		07 Oct 2023		
Machine Age	kms	Client Info		94225		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION	l	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	54		
Chromium	ppm	ASTM D5185(m)	>20	1		
Nickel	ppm	ASTM D5185(m)	>2	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>2	2		
Aluminum	ppm	ASTM D5185(m)	>25	28		
Lead	ppm	ASTM D5185(m)	>40	2		
Copper	ppm	ASTM D5185(m)	>330	52		
Tin	ppm	ASTM D5185(m)	>15	5		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	20		
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		20 <1		
		. ,		-		
Barium	ppm	ASTM D5185(m)	0 50	<1		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 50	<1 111		
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0	<1 111 2		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950	<1 111 2 689		 
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050	<1 111 2 689 1699		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995	<1 111 2 689 1699 817	  	  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180	<1 111 2 689 1699 817 1003	   	   
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180	<1 111 2 689 1699 817 1003 2010	   	   
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600	<1 111 2 689 1699 817 1003 2010 <1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600	<1 111 2 689 1699 817 1003 2010 <1 current	      history1	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600	<1 111 2 689 1699 817 1003 2010 <1 current 34	     history1	     history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25	<1 111 2 689 1699 817 1003 2010 <1 current 34 7	      history1	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	<1 111 2 689 1699 817 1003 2010 <1 current 34 7 71	      history1	      history2  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600 2600 2600 255 >20 20 imit/base	<1 111 2 689 1699 817 1003 2010 <1 Current 34 7 71 current	     history1   history1	     history2   history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	<1 111 2 689 1699 817 1003 2010 <1 0.34 7 71 0.3	     history1  history1  history1	     history2  history2  history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20	<1 111 2 689 1699 817 1003 2010 <1 Current 34 7 71 Current 0.3 13.6	      history1   history1  history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li></li></ul>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7844* ASTM D7624*	0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	<1 111 2 689 1699 817 1003 2010 <1 Current 34 7 7 71 Current 0.3 13.6 28.8	      history1  history1  history1	      history2  history2

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