

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **YRD 3** Component **Diesel Engine** Fluid **VALVOLINE 15W40 (--- GAL)**

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

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.

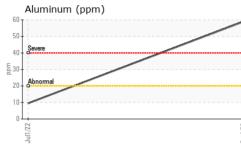
Fluid Condition

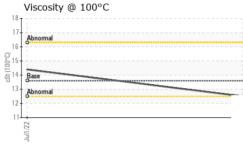
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

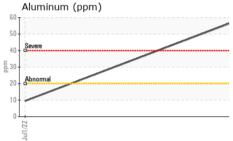
			Jui2022	Oct2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0033230	IL05597816	
Sample Date		Client Info		04 Oct 2023	01 Jul 2022	
Machine Age	hrs	Client Info		0	2743	
Oil Age	hrs	Client Info		15403	0	
Oil Changed	1110	Client Info		Changed	N/A	
Sample Status				NORMAL	ABNORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method	20.L	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	81	▲ 168	
Chromium	ppm	ASTM D5185m	>20	7	5	
Nickel		ASTM D5185m	>20	/ <1	0	
Titanium	ppm	ASTM D5185m	>4	1	<1	
Silver	ppm	ASTM D5185m	>3	0	< 1	
Aluminum	ppm			59	↓ 10	
	ppm	ASTM D5185m	>20			
Lead	ppm	ASTM D5185m	>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	6	57	
Tin	ppm	ASTM D5185m	>15	<1	1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron		AOTH DELOF	20	21	10	
	ppm	ASTM D5185m	39	21	10	
Barium	ppm ppm	ASTM D5185m ASTM D5185m		0	0	
		ASTM D5185m ASTM D5185m	1 49			
Molybdenum Manganese	ppm	ASTM D5185m	1 49	0	0	
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	1 49	0 62	0 47	
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1	0 62 2	0 47 6	
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1 616	0 62 2 725	0 47 6 829	
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1 616 1554	0 62 2 725 1292	0 47 6 829 1060	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1 616 1554 899	0 62 2 725 1292 768	0 47 6 829 1060 844	
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	1 49 1 616 1554 899 1069	0 62 2 725 1292 768 984	0 47 6 829 1060 844 1072	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624	0 62 2 725 1292 768 984 2435 current 11	0 47 6 829 1060 844 1072 2584 history1 ▲ 25	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25	0 62 2 725 1292 768 984 2435 current	0 47 6 829 1060 844 1072 2584 history1	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25	0 62 2 725 1292 768 984 2435 current 11	0 47 6 829 1060 844 1072 2584 history1 ▲ 25	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25	0 62 2 725 1292 768 984 2435 current 11 4	0 47 6 829 1060 844 1072 2584 history1 ▲ 25 4	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25 >20 <i>limit/base</i>	0 62 2 725 1292 768 984 2435 <u>current</u> 11 4 86	0 47 6 829 1060 844 1072 2584 ► 2584 25 4 3	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	0 62 2 725 1292 768 984 2435 current 11 4 86 current	0 47 6 829 1060 844 1072 2584 history1 ▲ 25 4 3 history1	 history2 history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 imit/base >25 >20 imit/base >3 >20	0 62 2 725 1292 768 984 2435 current 11 4 86 current 0.3	0 47 6 829 1060 844 1072 2584 ► 25 4 25 4 3 3 ► history1 1.7	 history2 history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 imit/base >25 >20 imit/base >3 >20	0 62 2 725 1292 768 984 2435 current 11 4 86 current 0.3 11.3	0 47 6 829 1060 844 1072 2584 ► 25 4 3 25 4 3 1.7 1.7 21.7	 history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1 49 1 616 1554 899 1069 2624 imit/base >25 >20 imit/base >3 >20 >30	0 62 2 725 1292 768 984 2435 <u>current</u> 11 4 86 <u>current</u> 0.3 11.3 22.7	0 47 6 829 1060 844 1072 2584 history1 ▲ 25 4 3 history1 1.7 21.7 34.0	 history2 history2
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	1 49 1 616 1554 899 1069 2624 imit/base >25 .20 imit/base >3 >20 30 imit/base	0 62 2 725 1292 768 984 2435 current 11 4 86 current 0.3 11.3 22.7 current	0 47 6 829 1060 844 1072 2584	 history history history history

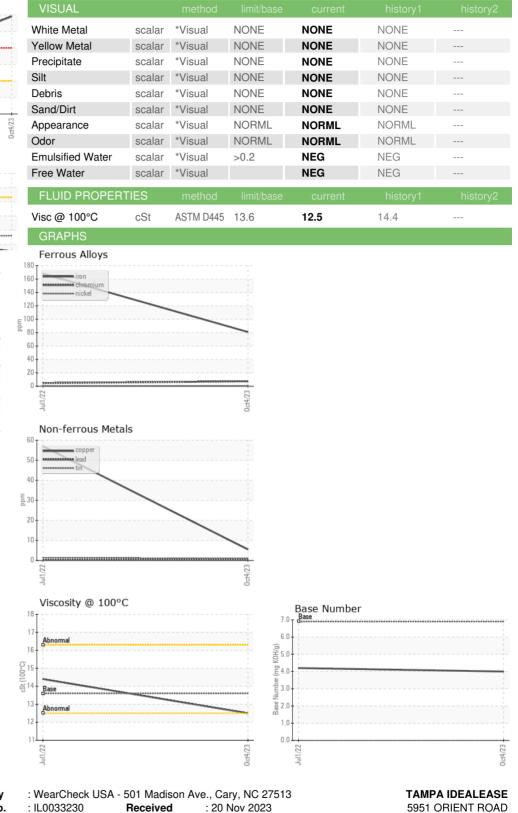


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: 21 Nov 2023 : Wes Davis

