

# **OIL ANALYSIS REPORT**

Sample Rating Trend



### Machine Id **2726** Component **Diesel Engine** Fluid **VALVOLINE SYNPOWER MOTOR OIL 5W40 (--- QTS)**

#### 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

There is no indication of any contamination in the oil.

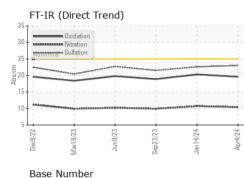
# Fluid Condition

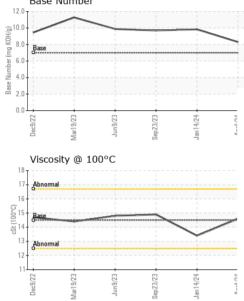
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0766466	WC0766465	WC0766464
Sample Date		Client Info		04 Apr 2024	14 Jan 2024	23 Sep 2023
Machine Age	mls	Client Info		779326	752007	723572
Oil Age	mls	Client Info		27319	28435	27825
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	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 METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	23	19	16
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		7	4	6
Lead	ppm	ASTM D5185m		2	1	4
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 26	history1 19	history2 16
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	26	19	16
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	26 0	19 2	16 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 62	19 2 65	16 0 66
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	26 0 62 <1	19 2 65 0	16 0 66 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		26 0 62 <1 1029	19 2 65 0 1118	16 0 66 <1 997
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1930	26 0 62 <1 1029 960	19 2 65 0 1118 814	16 0 66 <1 997 787
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	1930 770	26 0 62 <1 1029 960 1015	19 2 65 0 1118 814 890	16 0 66 <1 997 787 937
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	1930 770	26 0 62 <1 1029 960 1015 1230	19 2 65 0 1118 814 890 1252	16 0 66 <1 997 787 937 1191
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	1930 770 840	26 0 62 <1 1029 960 1015 1230 3909	19 2 65 0 1118 814 890 1252 3019	16 0 66 <1 997 787 937 1191 3569
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	1930 770 840 Iimit/base	26 0 62 <1 1029 960 1015 1230 3909 current	19 2 65 0 1118 814 890 1252 3019 history1	16 0 66 <1 997 787 937 1191 3569 history2
Boron Barium 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 <b>method</b>	1930 770 840 limit/base >25	26 0 62 <1 1029 960 1015 1230 3909 current 4	19 2 65 0 1118 814 890 1252 3019 history1 8	16 0 66 <1 997 787 937 1191 3569 history2 5
Boron Barium 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 ASTM D5185m ASTM D5185m	1930 770 840 limit/base >25	26 0 62 <1 1029 960 1015 1230 3909 Current 4 6	19 2 65 0 1118 814 890 1252 3019 history1 8 10	16 0 66 <1 997 787 937 1191 3569 history2 5 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1930 770 840 limit/base >25 >20	26 0 62 <1 1029 960 1015 1230 3909 current 4 6 5	19 2 65 0 1118 814 890 1252 3019 history1 8 10 2	16 0 66 <1 997 787 937 1191 3569 history2 5 8 8 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1930 770 840 limit/base >25 >20 limit/base	26 0 62 <1 1029 960 1015 1230 3909 current 4 6 <1 current	19 2 65 0 1118 814 890 1252 3019 history1 8 10 2	16 0 66 <1 997 787 937 1191 3569 history2 5 8 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1930 770 840 limit/base >25 >20 limit/base >3	26 0 62 <1 1029 960 1015 1230 3909 current 4 6 <1 current 1	19 2 65 0 1118 814 890 1252 3019 history1 8 10 2 history1 0.8	16 0 66 <1 997 787 937 1191 3569 history2 5 8 2 2 history2 0.7
Boron Barium 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	1930 770 840 limit/base >25 >20 limit/base >3 >20	26 0 62 <1 1029 960 1015 1230 3909 current 4 6 <1 current 1 1 10.4	19 2 65 0 1118 814 890 1252 3019 history1 8 10 2 history1 0.8 10.7	16 0 66 <1 997 787 937 1191 3569 history2 5 8 2 2 history2 0.7 9.9
Boron Barium 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	1930 770 840 225 >25 >20 <u>limit/base</u> >3 >20 >3 >20	26 0 62 <1 1029 960 1015 1230 3909 current 4 6 <1 current 1 10.4 23.0	19 2 65 0 1118 814 890 1252 3019 history1 8 10 2 <b>history1</b> 0.8 10.7 22.6	16 0 66 <1 997 787 937 1191 3569 history2 5 8 2 2 history2 0.7 9.9 21.5



# **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	
Jan14/24 - Apr4/24 -	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Jan1 Apr	Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	NEG	
	FLUID PROPER	TIES	method	limit/base	current	history1	history2	
	Visc @ 100°C	cSt	ASTM D445	14.5	14.6	13.4	14.9	
	GRAPHS							
	Iron (ppm)			10	Lead (ppm)			
24	200 Severe				Severe			
Jan 14/24	150				50 -			
7	Abnormal			E.	Abnormal			
	50-			2	20 -			
			4			~ ~ ~		
	Dec9/22 Mar19/23	Sep23/23	Jan 14/24	Apr4/24	Dec9/22 Mar19/23	Jun9/23 Sep23/23	Jan 14/24 Apr4/24	
الاربي. الاربي	2	Seit S	Jai	4			Jai A	
	Aluminum (ppm)			5	Chromium (p	pm)		
	40 - Severe			4	Severe			
	= <sup>30</sup>			udd	30 -			
Jan 14/24	20 - Abnormal	<del>-</del>		ā 2	Abnormal			
Jan	10-			1	10-			
			4	4			* *	
	Dec9/22 - Mar19/23 -	Sep23/23	Jan 14/24	Apr4/24	Dec9/22 Mar19/23	Jun9/23 Sep23/23	Jan 14/24 Apr4/24	
		s s	Pa	4		0	Ja /	
	Copper (ppm)		Silicon (ppn <sup>80</sup> T Severe					
	300				50	1 1		
	툡 200 -			Ed 4	Abnormal			
	100			2	20			
			4	4			4 4	
	Dec9/22 Mar19/23	Sep23/23	Jan 14/24	Apr4/24	Dec9/22 Mar19/23	Jun9/23 Sep23/23	Jan 14/24 Apr4/24	
	2	05	J <sub>a</sub>		2	0	P P	
	Viscosity @ 100°C	•		12	Base Number	r 		
	Abnormal				.0-			
				B B	0			
	이 14 Base 14 Abnormal			aquin 4				
	12			(b)H0) Base Number (mg K0H/g) 5 9 9 6				
	10			0			+ +	
	Dec9/22 Mar19/23	Sep23/23	Jan 14/24	Apr4/24	Dec9/22 Mar19/23	Jun9/23 Sep23/23	Jan14/24 Apr4/24	
		S	Ja	~	M	ی در ا	Ja A	
Laboratory Sample No. Lab Number Unique Number Test Package	: WC0766466 : 06153337 : 10983415	- 501 Madison Ave., Cary, NC 27513 <b>Received</b> : 18 Apr 2024 <b>Tested</b> : 22 Apr 2024 <b>Diagnosed</b> : 22 Apr 2024 - Wes Davis				KG&P TRUCKING 999 TOWNSHIP RD 133 WEST SALEM, OH US 44287 Contact: KEVIN WHITE		
	contact Customer Serv		00-237-136	9.	kevinewhite999@gmail.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)

Report Id: KGPWES [WUSCAR] 06153337 (Generated: 04/22/2024 08:05:37) Rev: 1

Certificate L2367

Contact/Location: KEVIN WHITE - KGPWES

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