

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **7017** Component **Diesel Engine** Fluid **{not provided} (--- GAL)**

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN level is low.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0005572		
Sample Date		Client Info		28 Dec 2023		
Machine Age	mls	Client Info		211433		
Oil Age	mls	Client Info		10000		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	nnm	ASTM D5185m	>100	24		
Chromium	ppm ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>20	، <1		
Titanium	ppm	ASTM D5185m	~7	<1		
Silver	ppm	ASTM D5185m	>3	< 1 0		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	5		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m	210	0		
Cadmium	ppm	ASTM D5185m		0		
	PP			•		
		mathad	limit/booo	ourropt	historyd	history 0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	15		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	15 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 66		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 66 2		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 66 2 481		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 66 2 481 1061	 	
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	limit/base	15 0 66 2 481 1061 688		
Boron Barium 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	limit/base	15 0 66 2 481 1061 688 762	 	
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		15 0 66 2 481 1061 688		
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	limit/base	15 0 66 2 481 1061 688 762	 	
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	limit/base	15 0 66 2 481 1061 688 762 2744		
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	limit/base	15 0 66 2 481 1061 688 762 2744 current		
Boron Barium 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 ASTM D5185m method ASTM D5185m	limit/base >25	15 0 66 2 481 1061 688 762 2744 current 6	 history1	 history2
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	limit/base >25 >20	15 0 66 2 481 1061 688 762 2744 current 6 11	 history1	 history2
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	limit/base >25 >20	15 0 66 2 481 1061 688 762 2744 <u>current</u> 6 11 2	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base	15 0 66 2 481 1061 688 762 2744 current 6 11 2 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base >3	15 0 66 2 481 1061 688 762 2744 current 6 11 2 2 5.0 current	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	limit/base >25 >20 >5 limit/base >3	15 0 66 2 481 1061 688 762 2744 <i>current</i> 6 11 2 5.0 <i>current</i> 0.1	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20	15 0 66 2 481 1061 688 762 2744 <i>current</i> 6 11 2 5.0 <i>current</i> 0.1 14.4	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	15 0 66 2 481 1061 688 762 2744 current 6 11 2 2 5.0 current 0.1 14.4 29.1	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	15 0 66 2 481 1061 688 762 2744 current 6 11 2 5.0 current 0.1 14.4 29.1 current	 history1 history1 history1 history1 history1	 history2 history2 history2 history2 history2 history2



OIL ANALYSIS REPORT

method

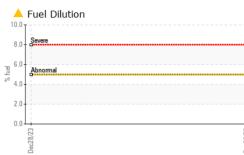
limit/base

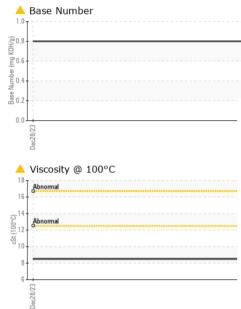
current

history1

history2

VISUAL





NONE White Metal *Visual NONE scalar Yellow Metal *Visual NONE NONE scalar Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris *Visual NONE scalar NONE Sand/Dirt NONE NONE scalar *Visual Jec28/23 NORML Appearance scalar *Visual NORML Odor *Visual NORML NORML scalar **Emulsified Water** scalar *Visual >0.2 NEG Free Water scalar *Visual NEG FLUID PROPERTIES method limit/base current history history2 Visc @ 100°C cSt ASTM D445 GRAPHS Ferrous Alloys 20 licke 1 lec28/7 ler 28/7 Non-ferrous Metals head Dec28/23 Viscosity @ 100°C 0.5 Base Number 0.8 10 <u>⊜</u> 0.7 H 0.6 (100°C) Ē 0.5 년 0.4 ŝ 0.3 aseg 0.2 0.1 0.0 Dec28/23 Dec28/23 Dec28/23 Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sapp Bros. Fleet - Lincoln Location Sample No. Recieved : 17 Jan 2024 : SBP0005572 Lab Number Diagnosed : 06063473 : 24 Jan 2024 : 10834855 US Unique Number Diagnostician : Doug Bogart

Contact: Service Manager

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)

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Certificate L2367

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