

Sample No: VCP444490

Oil Type: VOLVO PREMIUM GEAR OIL 80W-90 GL-5

Job No: SW1028515

Sample Number					
Sample Number	SAMPLE	INFORMATION			
Sample Date 06 Feb 2024 17 Sep 2021 Machine Hours 0 2358 Oil Hours 0 2358 Oil Changed Changed Sample Status SEVERE SEVERE CONTAMINATION Vision of Ppm 3063 1543 Sodium ppm 3063 1543 Sodium ppm 232 117 VELAM METALS Iron ppm 4459 4277 Copper ppm 4459 4277 Copper ppm 41 1 Aluminum ppm 421 1 Chromium ppm 825 313 Molybdenum ppm 82 Chromium ppm 81 2 <th< td=""><td></td><td>_</td><td></td><td>VCP319102</td><td> </td></th<>		_		VCP319102	
Machine Hours 0 2358 Oil Hours 0 2358 Oil Changed Changed Sample Status SEVERE SEVERE CONTAMINATION Water % NEG Sodium ppm 3063 1543 Sodium ppm 204 54 VEAR METALS Iron ppm 4459 4277 Copper ppm 6 7 Lead ppm 41 1 Aluminum ppm 825 313 Chromium ppm 8 2 Molybdenum ppm 1 4 Mickel ppm 30 35					
Oil Changed Changed Changed Sample Status SEVERE SEVERE Voit Oil Condition Visc @ 40°C CST 188 210 CONTAMINATION Water NEG NEG NEG Silicon ppm 3063 1543 Sodium ppm 204 54 Volton Ppm 232 117 Very MEAR METALS Iron ppm 4459 4277 Very METALS Iron ppm 4459 4277 Copper ppm 6 7 Calcum ppm 4825 313 Chromium ppm 8 2					
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Sample Status			-		
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OIL CONDITION CONTAMINATION Water % NEG	Sample Status		SEVERE	SEVERE	
Visc @ 40°C cSt ■188 □210 CONTAMINATION Water % NEG NEG Sodium ppm □ 3063 □ 1543 Sodium ppm □ 204 □ 54 Potassium ppm □ 232 □ 117 WEAR METALS Iron ppm □ 4459 □ 4277 Copper ppm □ 6 □ 7 Lead ppm □ < 1	VOLVO				
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CONTAMINATION Water % NEG NEG Silicon ppm 3063 1543 Sodium ppm 2204 54	Visc @ 40°C	cSt	188	210	
CONTAMINATION Water % NEG NEG Silicon ppm 3063 1543 Sodium ppm 204 54 Potassium ppm 2322 1117 WEAR METALS Iron ppm 4459 4277 Copper ppm 6 7 Lead ppm -<- 1 1 1 Tin ppm 4825 313 Aluminum ppm 8825 313 Chromium ppm 1 44 Nickel ppm 8 2 Nickel ppm 8 2 Titanium ppm 41 17 Nickel ppm 30 35 Manganese ppm 30 35 Vanadium ppm 1 <-1 Manganesium ppm 514 549 Magnesium ppm 158 111			_		
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Sodium	Water	%	NEG	NEG	
Potassium ppm 232 117 WEAR METALS Iron ppm 4459 4277 Copper ppm 6 7 Lead ppm <1	Silicon	ppm	3063	1543	
WEAR METALS Iron ppm ● 4459 ● 4277 Copper ppm ● 6 □ 7 Lead ppm □ <1	Sodium	ppm	204	□ 54	
Iron	Potassium	ppm	■232	117	
VEAR METALS VEAR METALS					
Iron	MEVD F	ETAL C			
Copper ppm ■6 ¬7 ¬¬¬¬ ¬¬¬¬ ¬¬¬¬¬ ¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬					
Lead ppm □ 1 Tin ppm □ <1			¥ 1.00	·	
Tin ppm □ <1			_		
Aluminum ppm		ppm	_		
Chromium ppm 22 31 Molybdenum ppm 1 4 Nickel ppm 8 2 Titanium ppm 41 17 Silver ppm 0 <1		ppm			
Molybdenum ppm 1 4 Nickel ppm 8 2 Titanium ppm 41 17 Silver ppm 0 <1	Aluminum	ppm			
Nickel ppm 8 2 Titanium ppm 41 17 Silver ppm 0 <1		ppm		3 1	
Titanium ppm 41 17 Silver ppm 0 <1	Molybdenum	ppm			
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Manganese ppm 30 35 Vanadium ppm 1 <1		ppm	_	1 7	
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Magnesium ppm □158 □111				-540	
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Zinc ppm ■22 ■30	_			_	
		ppm		3 0	
Phosphorus ppm 933 8 03	·		_		
Barium ppm 11 0		ppm			
Boron ppm 163 105	Boron	ppm	163	1 05	



ARNOLD MACHINERY COMPANY 2975 WEST 2100 SOUTH SALT LAKE CITY, UT US 84119 Contact: S. KARBACH skarbach@arnoldmachinery.com

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Diagnosis

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil is no longer serviceable due to the presence of contaminants.

Depot:VOLVO8770Unique No:10873860Signed:Don BaldridgeReport Date:13 Feb 2024



CONSTRUCTION EQUIPMENT





