



ZF 20041959 - PORT DIESEL ENGINE

Sample No: VPA050906
Oil Type: NAPA SAE 30

SAMPLE INFORMAT	TION			
		VD4050006		
Sample Number		VPA050906	 	
Sample Date		09 Oct 2023	 	
Machine Hours		0	 	
Oil Hours		30	 	
Oil Changed		Changed	 	
Sample Status		ABNORMAL	 	
OIL CONDITION				
Visc @ 100°C	cSt	10.95	 	
Base Number (BN)	mg KOH/g	■7.2	 	
Oxidation (PA)	%	23	 	
` '				
CONTAMINATION				
Soot %	%	0	 	
Nitration (PA)	%	26	 	
Sulfation (PA)	%	35	 	
Glycol	%	NEG	 	
Fuel	%	■0.2	 	
Silicon		22		
	ppm	_		
Sodium	ppm	2	 	
Potassium	ppm		 	
WEAR METALS				
Iron	ppm	24	 	
Copper	ppm	316	 	
Lead	ppm	2	 	
Tin	ppm	■ <1	 	
Aluminum	ppm	<u> </u>	 	
Chromium	ppm	0	 	
Molybdenum		■ 102	 	
	ppm			
Nickel	ppm	1	 	
Titanium	ppm	<1	 	
Silver	ppm	0	 	
Manganese	ppm	<1	 	
Vanadium	ppm	0	 	
ADDITIVES				
Calcium	ppm	2411	 	
Magnesium	ppm	43	 	
Zinc	ppm	1164	 	
Phosphorus	ppm	986	 	
Barium	ppm	0	 	
Boron	ppm	10	 	
DOIOII	ppiii	10	 	

Power Products Systems LLC

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Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot:VP153550Unique No:10697291Signed:Doug BogartReport Date:25 Oct 2023





