OIL ANALYSIS REPORT



1640 ONAN D160945617 - CENTER GENSET

Sample No: VPA044371

Oil Type: SHELL ROTELLA T 15W40

Oil Changed Not Changed Sample Status NORMAL OIL CONDITION Visc @ 100°C cSt 13.25 CONTAMINATION % 73 CONTAMINATION % 68 Sold % % 0.2 Sold % % 68 Sulfation (PA) % 68 Sulfation (PA) % 57 Sulfation (PA) % 41.0 Sulfation (PA) % <1.0 Sodium ppm 5 Adapseine ppm 0					
Sample Date 14 Jul 2023 Machine Hours 850 Oil Hours 0 Oil Changed Not Changd Sample Status Not Changd Oil CONDITION Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Solutation (PA) % 57 Solutation ppm 5 Solitation (PA) % 57 Solitation (PA) % 1.0	SAMPLE INFORM	ATION			
Sample Date 14 Jul 2023 Machine Hours 850 Oil Hours 0 Oil Changed Not Changd Sample Status Not Changd Oil CONDITION Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Solutation (PA) % 57 Solutation ppm 5 Solitation (PA) % 57 Solitation (PA) % 1.0	Sample Number		VPA044371	 	
Machine Hours 850 Oil Hours 0 Sample Status NOR MAL Dil ConjUTION NORMAL Dil CONDITION Visc @ 100°C CSt 13.25 Oxidation (PA) % 73 COTTAMINATION % 68 Sold % % 0.2 Sulfation (PA) % 68 Sulfation (PA) % 57 Fuel % <1.0				 	
Oil Hours O Oil Changed Not Changd Sample Status NORMAL Oil CONDITION Visc @ 100°C cSt 13.25 Oxidation (PA) % 73 COTTAMINATION Soot % % 0.2 Soot % % 57 Sulfation (PA) % 51 Solfation (PA) % <1.0				 	
Sample Status NORMAL OIL CONDITION Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Nitration (PA) % 68 Sulfation (PA) % 57 Sulfation (PA) % 57 Glycol % NEG Sulfation (PA) % 57 Glycol % NEG Solitation (PA) m 5 Solitation (PA) m 0 Solitation (PA)	Oil Hours			 	
Sample Status NORMAL OIL CONDITION Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Nitration (PA) % 68 Sulfation (PA) % 57 Sulfation (PA) % 57 Glycol % NEG Sulfation (PA) % 57 Glycol % NEG Solitation (PA) m 5 Solitation (PA) m 0 Solitation (PA)	Oil Changed		Not Changd	 	
OIL CONDITION Visc @ 100°C cSt 13.25 Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Nitration (PA) % 68 Sulfation (PA) % 57 Fuel % <1.0	-		-	 	
Nice @ 100°C CSt 13.25 Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Stuffation (PA) % 68 Sulfation (PA) % 57 Glycol % NEG Silicon ppm 13 Sodium ppm 3 Potassium ppm 2 Copper ppm 2 Lead ppm 2 Aluminum ppm 2					
Oxidation (PA) % 73 CONTAMINATION Soot % % 0.2 Sulfation (PA) % 68 Sulfation (PA) % 57 Glycol % <1.0					
CONTAMINATION Soot % % 0.2 Nitration (PA) % 68 Sulfation (PA) % 57 Sulfation (PA) % 57 Sulfation (PA) % 57 Fuel % <1.0				 	
Soot % % 0.2 Nitration (PA) % 68 Sulfation (PA) % 57 Glycol % NEG Fuel % <1.0	Oxidation (PA)	%	73	 	
Nitration (PA) % 68 Sulfation (PA) % 57 Glycol % NEG Fuel % <1.0	CONTAMINATION				
Sulfation (PA) % 57 Glycol % NEG Fuel % <1.0	Soot %	%	0.2	 	
Sulfation (PA) % 57 Glycol % NEG Fuel % <1.0	Nitration (PA)	%	68	 	
Fuel % <1.0 Silicon ppm 5 Sodium ppm 3 Potassium ppm 1 WEAR METALS Iron ppm 9 Lead ppm 0 Aluminum ppm 2 Molybdenum ppm 41 Molybdenum ppm 41 Silver ppm 0 Silver ppm 0 Magnese ppm <1		%	57	 	
Fuel % <1.0 Silicon ppm 5 Sodium ppm 3 Potassium ppm 1 WEAR METALS Iron ppm 9 Copper ppm 2 Lead ppm 0 Aluminum ppm 2 Molybdenum ppm 42 Nickel ppm 0 Silver ppm 0 Magnese ppm 1 AbultrUKS	Glycol	%	NEG	 	
Sodium ppm 3 Potassium ppm 1 WEAR METALS Iron ppm 9 Copper ppm 2 Lead ppm 0 Aluminum ppm 21 Aluminum ppm 21 Molybdenum ppm 21 Molybdenum ppm 0 Nickel ppm 0 Silver ppm 0 Vanadium pm <1		%	<1.0	 	
Potassium ppm 1 WEAR METALS Iron ppm 9 Copper ppm 2 Lead ppm 0 Aluminum ppm 21 Aluminum ppm 21 Aluminum ppm 21 Molybdenum ppm 21 Molybdenum ppm 42 Nickel ppm 0 Silver ppm 0 Manganese ppm <1 ADDITIVES Magnesium ppm<	Silicon	ppm	5	 	
WEAR METALS Iron ppm 9 Copper ppm 0 Lead ppm 0 Aluminum ppm 2 Aluminum ppm 2 Chromium ppm 2 Molybdenum ppm 42 Nickel ppm 0 Nickel ppm 0 Silver ppm 0 Vanadium ppm <1	Sodium	ppm	3	 	
Iron ppm 9 Copper ppm 2 Lead ppm 0 Tin ppm <1	Potassium	ppm	1	 	
Copper ppm 2 Lead ppm 0 Tin ppm <1 Aluminum ppm 2 Aluminum ppm <1 Molybdenum ppm <1 Molybdenum ppm 42 Nickel ppm 0 Silver ppm 0 Manganese ppm <1 Vanadium ppm <1 ADDITIVES Zinc ppm 749 Phosphorus ppm 0		maa	9	 	
Lead ppm 0 Tin ppm <1				 	
Tin ppm <1	••			 	
Aluminum ppm 2 Chromium ppm <1				 	
Chromium ppm <1 Molybdenum ppm 42 Nickel ppm 0 Titanium ppm <1				 	
Molybdenum ppm 42 Nickel ppm 0 Nickel ppm 0 Titanium ppm <1				 	
Nickel ppm 0 Titanium ppm <1			_	 	
Titanium ppm <1				 	
Silver ppm 0 Manganese ppm <1	Titanium			 	
Manganese ppm <1 Vanadium ppm <1 ADDITIVES Calcium ppm 1413 Magnesium ppm 1749 Zinc ppm 963 Phosphorus ppm 0 Barium ppm 0	Silver		0	 	
ADDITIVESCalciumppm1413Magnesiumppm749Zincppm963Phosphorusppm777Bariumppm0	Manganese		 <1	 	
ADDITIVES Calcium ppm 1413 Magnesium ppm 749 Zinc ppm 963 Phosphorus ppm 777 Barium ppm 0	Vanadium	ppm	<1	 	
Magnesium ppm 749 Zinc ppm 963 Phosphorus ppm 777 Barium ppm 0	ADDITIVES				
Magnesium ppm 749 Zinc ppm 963 Phosphorus ppm 777 Barium ppm 0	Calcium	ppm	1413	 	
Zinc ppm 963 Phosphorus ppm 777 Barium ppm 0				 	
Phosphorus ppm 777 Barium ppm 0	Zinc				
Barium ppm 0	Phosphorus			 	
	Barium				
	Boron	ppm		 	

SMART DIESEL SERVICE

102 NW 133RD AVE, UNIT 103 PLANTATION, FL US 33325 Contact: ANDRES GARMENDIA smartdieselservice@gmail.com T: (954)258-8100 F.

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal for OEM. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

 Depot:
 VPSMAPLA

 Unique No:
 10561744

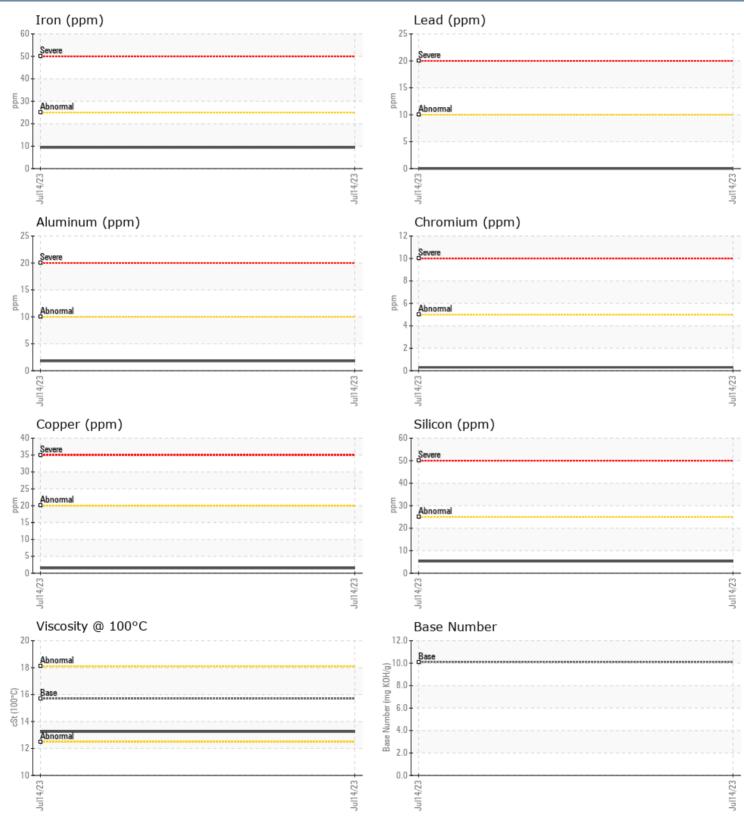
 Signed:
 Doug Bogart

 Report Date:
 17 Jul 2023

OIL ANALYSIS REPORT



GRAPHS



Report Id: VPSMAPLA [WUSCAR] 05900388 (Generated: 07/17/2023 16:32:25) Rev: 1

Contact/Location: ANDRES GARMENDIA - VPSMAPLA