OIL ANALYSIS REPORT

BERNARD GOODIN 3723/55-15 FISCHER PANDA E03021074 - CENTER GENSET

Sample No: VPA050630

Oil Type: SHELL 15W40

SAMPLE INFORMATION

Sample Number VPA050630 VPA047957 Sample Date 0 8 Apr 2024 19 Jan 2023 Machine Hours 834 0 Oil Hours 0 200 Sample Status NORMAL Sample Status NORMAL Dil CONDITION NORMAL Dil CONDITION Status Vis @ 100° C C51 13.5 13.4 Sample Number (BN) mg KOH/g 8.5 9.9 Oxidation (PA) % 61 59 Solt% 0.1 Solt% 61 0.1 Water % A5 53 Solt% NG 1.0					
Sample Date 08 Apr 2024 19 Jan 2023 Machine Hours 0 200 Oil Hours 0 200 Sample Status NORMAL NORMAL DIL CONDITION Visc © 100°C CSt 13.5 13.4 Base Number (BN) mg KOH/g 8.5 9.9 Visc © 100°C CSt 13.4 Vater % 61 59 Soot % % 0.1 0.1 Sulfation (PA) % 53 Sulfation (PA) % 10 <1.0 Sulfation (PA) % 13 8 Sulfation (PA) % 1	Sample Number		VPA050630	VPA047957	
Machine Hours 834 0 Oil Hours 0 200 Sample Status NORMAL NORMAL Sample Status NORMAL NORMAL OIL CONDITION Size @ 100°C cSt 13.5 13.4 Base Number (BN) mg KOH/g 8.5 9.9 Contaminor (PA) % 61 59 Kower % NEG NEG Water % NEG NEG Solfsion (PA) % 43 50 Sulfation (PA) % NEG NEG Sulfation (PA) % 43 50			08 Apr 2024		
Oil Hours O 200 Oil Changed Changed Changed Sample Status NORMAL NORMAL NORMAL OIL CONDITION Visc @ 100°C CSt 13.5 13.4 Dit Condition % 61 59 CNTAMINATION % 61 0.1 Soot % % 0.1 0.1 Soot % % 0.1 0.1 Soot % % 55 53 Sulfation (PA) % 51 2 Sulfation (PA) % 52 53 Sulfation (PA) % 51 2 Sulfation (PA) % 52 2 <t< td=""><td></td><td></td><th></th><td></td><td> </td></t<>					
Oil Changed Sample Status Changed NORMAL Changed NORMAL Solution NORMAL NORMAL OIL CONDITION Solution (PA) mg KOH/g 8.5 9.9 Base Number (BN) mg KOH/g 8.5 9.9 Curtamination (PA) % 61 59 Curtamination (PA) % 0.1 0.1 Soltis (PA) % 0.1 0.1 Nutration (PA) % 43 50 Sulfation (PA) % 410 Sulfation (PA) % 410 Sulfation (PA) % 410 Sulfation (PA) ppm <10					
Sample Status NORMAL NORMAL OIL CONDITION Base Number (BN) mg KOH/g 8.5 9.9 Cotidation (PA) % 61 59 COTTAMINATION Water % NEG NEG Nitration (PA) % 0.1 0.1 Soot % % 0.1 0.1 Nitration (PA) % 55 53 Sulfation (PA) % <1.0					
Oll CONDITION Visc @ 100°C cSt 13.5 13.4 Base Number (BN) mg KOH/g 8.5 9.9 Oxidation (PA) % 61 59 CNTAMINATION % 61 0.1 Soot % % 0.1 0.1 Nitration (PA) % 43 50 Sulfation (PA) % 43 50 Sulfation (PA) % 43 8 Sulfation (PA) % 43 8 Sulfation (PA) % 410 <1.0	-		-	-	
Visc @ 100°C cSt 13.5 13.4 Base Number (BN) mg KOH/g 8.5 9.9.9 Oxidation (PA) % 61 59 CUTTAMINATION Water % NEG NEG Soot % % 0.1 0.1 Soot % % 43 50 Glycol % NEG NEG Sulfation (PA) % 410 Sulfation (PA) % 10 Sulfation (PA) % 110 Sulfation (PA) % 110 21 Sodium ppm 21 1 Sodium ppm 21 1 <t< th=""><th>Sample Status</th><th></th><th>NORMAL</th><th>NORIVIAL</th><th> </th></t<>	Sample Status		NORMAL	NORIVIAL	
Base Number (BN) mg KOH/g 8.5 9.9 Cxidation (PA) % 61 59 COxidation (PA) % NEG NEG Vater % NEG NEG Soot % % 0.1 0.1 Soot % % A3 50 Sulfation (PA) % 43 50 Sulfation (PA) % A55 53 Sulfation (PA) % A10 <1.0	OIL CONDITION				
Oxidation (PA) % 61 59 CONTAMINATION Water % NEG NEG Soot % % 0.1 0.1 Sulfation (PA) % 43 50 Sulfation (PA) % S5 53 Sulfation (PA) % NEG NEG Sulfation (PA) % 43 50 Sulfation (PA) % 43 8 Soliton ppm 2 1 2 Vetassium ppm 2 4 Copper	Visc @ 100°C	cSt	13.5	13.4	
Oxidation (PA) % 61 59 CONTAMINATION Water % NEG NEG Soot % 0.0.1 0.1 Nitration (PA) % 43 50 Sulfation (PA) % 410 0.1 Sulfation (PA) % 410 Sulfation (PA) % 410 Solitoin ppm 21 21 22 Solitoin ppm 21 1 Neede ppm 21 1 Lead pp	Base Number (BN)	mg KOH/g	8.5	9.9	
Water % NEG NEG Soot % % 0.1 0.1 Nitration (PA) % 43 50 Sulfation (PA) % 55 53 Glycol % NEG NEG Fuel % <1.0	Oxidation (PA)		61	59	
Water % NEG NEG Soot % % 0.1 0.1 Nitration (PA) % 43 50 Sulfation (PA) % 55 53 Glycol % NEG NEG Fuel % <1.0 Silicon ppm 3 8 Soldium ppm 2 2 Vetassium ppm 2 2 Vetassium ppm 2 4 Vetassium ppm <1 1 Vetassium ppm <1 1 Lead ppm <1 1 Aluminum ppm 0 <1 <th></th> <th></th> <th></th> <th></th> <th></th>					
Soot % % 0.1 Nitration (PA) % 43 50 Sulfation (PA) % 55 53 Glycol % NEG NEG Fuel % <1.0	CONTAMINATION				
Nitration (PA) % 43 50 Sulfation (PA) % 55 53 Glycol % NEG NEG Fuel % <1.0	Water	%	NEG	NEG	
Sulfation (PA) % 55 53 Glycol % NEG NEG Fuel % <1.0 <1.0 Silicon ppm 3 8 Sodium ppm 2 Potassium ppm 2 2 VEAR METALS Iron ppm 2 4 Copper ppm <1	Soot %	%	0.1	0.1	
Glycol % NEG NEG Fuel % <1.0	Nitration (PA)	%	43	50	
Fuel % <1.0 <1.0 Silicon ppm 3 8 Sodium ppm <1	Sulfation (PA)	%	55	53	
Silicon ppm 3 8 Sodium ppm 2 Potassium ppm 2 WEAR METALS 2 Iron ppm 2 4 Copper ppm <1	Glycol	%	NEG	NEG	
Sodium ppm <1 2 Potassium ppm 2 2 WEAR METALS Iron ppm 2 4 Copper ppm <1	Fuel	%	<1.0	<1.0	
Potassium ppm 2 WEAR METALS	Silicon	ppm	3	8	
WEAR METALS Iron ppm 2 4 Copper ppm <1	Sodium	ppm		2	
Iron ppm 2 4 Copper ppm <1	Potassium	ppm	2	2	
Copper ppm <1	WEAR METALS				
Copper ppm <1 <1 Lead ppm <1	Iron	ppm	2	4	
Lead ppm <1	Copper				
Tin ppm <1			 <1		
Aluminum ppm 1 Chromium ppm 0 <1					
Chromium pp 0 <1 Molybdenum ppm 48 71 Nickel ppm 0 <1	Aluminum		_		
Molybdenum ppm 48 71 Nickel ppm 0 <10	Chromium				
Nickel ppm 0 <1 Titanium ppm 0 0 Silver ppm 0 0 Manganese ppm 0 <1					
Titanium ppm 0 Silver ppm 0 0 Manganese ppm 0 <1			0		
Silver ppm 0 Manganese ppm 0 <1	Titanium		_		
Manganese ppm 0 <1 Vanadium ppm <1 <1 ADDITIVES Calcium ppm 1691 1270 Magnesium ppm 291 1134 Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0 0					
Vanadium ppm <1 <1 ADDITIVES Calcium ppm 1691 1270 Magnesium ppm 291 1134 Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0 0					
ADDITIVES Calcium ppm 1691 1270 Magnesium ppm 291 1134 Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0 0	-				
Calcium ppm 1691 1270 Magnesium ppm 291 1134 Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0 0		TT			
Magnesium ppm 291 1134 Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0					
Zinc ppm 1150 1476 Phosphorus ppm 983 1181 Barium ppm 0		ppm			
Phosphorus ppm 983 1181 Barium ppm 0 0	Magnesium	ppm	291	1134	
Barium ppm 0 0	Zinc	ppm	1150	1476	
Barium ppm 0 0	Phosphorus	ppm	983	1181	
	Barium		0	0	
	Boron	ppm	327	0	

GRAND BANKS

450 SW SALEM RD STUART, FL US 34994 Contact: ROBERT ANTONA roberta@gbmarinegroup.com T: (609)384-5290 E:

Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

 Depot:
 VP531377

 Unique No:
 10989296

 Signed:
 Sean Felton

 Report Date:
 23 Apr 2024

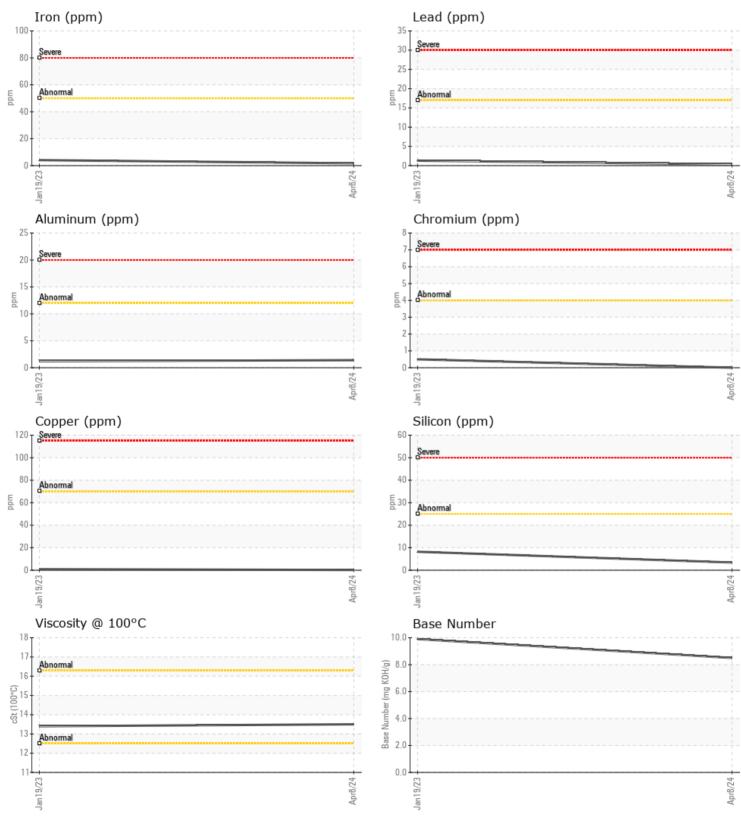
Contact/Location: ROBERT ANTONA - VP531377



OIL ANALYSIS REPORT



GRAPHS



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Contact/Location: ROBERT ANTONA - VP531377