



SERVICE REPORT

Vessel Name: NORDAMELIA

IMO No: 9724958

Port of attendance: Santos / Brasil

Departure of teams: 23.04.2018 (from Istanbul to Santos/Brasil)

Time of attendance: 25.04.2018 09:00 LT

Time of departure: 30.04.2018 13:00 LT

Arrival to workshop: 01.05.2018 23:30 LT

Job Description: No.4 Diesel Gen. Engine CMP-MAN 7L27/38, renewal of No.7 cylinder unit damaged parts by GC spares, replacement of complete turbocharger under GC No.162.

PO Number:

Our Job No: DCS-TR SERV-18M04-45



青島万度力船舶工程有限公司
METALOCK ENGINEERING (QINGDAO) LTD.



AUTHOR OF REPORT:

Name: H. Sercan Öztürk / Service Engineer
Department: DCS Istanbul Office
Job started: 23.03.2018
Job completed: 30.04.2018
Report date: 30.04.2018
Job ID No: DCS-TR SERV-18M04-45

JOB ORDER:

Destination: Santos / Brasil- Buenos Aires & Zarate / Argentina
Participants: Mr. H. Sercan Öztürk / Service Engineer
Mr. Cemil Göktürk / Service Technician
Reason for visit: No: 4 Diesel Generator No.7 cylinder unit & turbocharger renewal

CUSTOMER DETAILS:

Name: CMP
Requested by: Mr.
Vessel / Plant: MV Nordamelia
IMO No: 9724958
Name of Yard: Guangzhou WenChong Shipyard / CHINA

ENGINE/EQUIPMENT DETAILS:

Engine/Eq. No: 16177
Engine/Eq. Type: 7L27/38
Manufacturer: CMP-MAN
Operating hours: 1499
Engine use: Aux. Engine
Rotation direction: Clockwise viewed from flywheel
Warranty Start date: 04/01/2017
End Warranty date:
ECS version:
Engine Power (kW): 2310 kW
Engine Speed: 720 RPM

TURBOCHARGER:

Manufacturer: MAN
Type: TCR-20-42087
Turbocharger No: 7035912 (old one) /7038033 New one)

APPENDIX:

Report consists of: 7 pages
Lubricant analysis:
Performance report:
Deflection report:



Service Partner of HHM-CMD, CMP (ex-ZJMD), Anqing-Daihatsu, Pielstick
Qingdao / Zhoushan / HongKong / Singapore / Houston / Istanbul



OPERATING CONDITIONS:

Area of operation: World wide / S. America
Fuel specs: RMK 500, 478,6 cSt, 1,0081 Density @ 15 C,% sulphur content
Fuel viscosity (cSt50C): 380 cSt (50 C)
Lube oil consumption: ... ltrs / 24 hours
Lube oil brand: Chevron TARO 40 XL 40(X)
Engine mean load: 700-1500 kW load

SUMMARY & CONCLUSION:

DCS Engineers had been ordered by CMP to attend on board of MV Nordamelia in Santos / Brasil & sail with vessel until replacement of No.4 Aux. Engine No.7 Cylinder unit & Turbocharger.

DCS Team consists of one Superintendent Engineer & one Service Technician fled to Santos / Brasil on 23rd but due to berthing delay; they were able to board the vessel on 25th of April 09:00 LT.

After attending on board of vessel; incident & chronological story of aux. Engine had been discussed & commenced the assigned job. Crew already dismantled all cylinder heads of No.4 AE.

DCS team commenced dismantling of No.7 cylinder unit & installed new cylinder liner, flame ring & piston with new rings.

After completion of No.7 Cylinder unit; teams commenced dismantling of Turbocharger & install new supplied Turbocharger on place. Pipe and other accesories fitted on turbocharger. Silencer protection kept fitted on it and before starting of A/E it should be removed from location.

DCS teams had been dismounted No.7 Crankpin bearing & observed that No.7 Crankpin bearing & Crankpin journal is in bad condition showing circumferential scoring due to abrasive residues in lubricating oil. These type of scoring on crankpin bearing & crankpin journals shows engine worked with dirty oil for sometime to get this kind of a damage. Oil treatment on board should be immediately improved, Lube oil purifiers , fine filters should be inspected & repaired if necessary.

No.7 Crankpin journal & bearing condition had been reported to the vessel's Chief Engineer & to our Head Office. After receiving order to open up another 2 Crankpin bearing for inspections; team dismantled No:4 & 6 Crankpin bearing & observed same & more serious condition on these Crankpin bearings & journals.Both Crankpin journals which was inspected had been found showing circumferential scoring around the bearing /crankpin due to abrasive residues, hard particules in engine system oil .

DCS team commenced fit back No.4-5-6 cylinder pistons & mount the Crankpin bearings of No.4 & 6 units.

There is no any material & tools for Crankpin journal superpolishing & also no Crankpin bearing available.

Recommendations:

- 1) Before starting of engine; all Crankpin bearing & journals should be inspected, Crankpin journals should be superpolished, Crankpin bearings should be renewed.
- 2) Main bearings also should be inspected & main bearing journals should be polished if necessary subject to this inspection.
- 3) Lube oil treatment should be improved as hard abrasive particules & residues should not enter system oil. Lube oil filters should be inspected & reconditioned/renewed as necessary.

DCS team had been departed from vessel on 30.04.2018 12:00 and arrived to workshop on 01.05.2018 23:30 LT.

JOBS & CHECKS CARRIED OUT:

- 1) No:7 Cylinder damaged cylinder liner & piston had been dismantled. New Cylinder liner with new seal rings installed, flame ring new piston fitted with new piston rings.
- 2) No:7 Crankpin bearing dismantled & inspected & refitted. Same Crankpin bearing had been used as there is no spares available on board.
- 3) No:4, 5 and 6 Cylinder pistons dismantled, cleaned & refitted with existing piston rings. All piston ring-groove clearances found in good order.
- 4) No: 4 & 6 Cylinder Crankpin bearings had been inspected, Both units fitted with same Crankpin bearing as no spares are available.
- 5) Old turbocharger (Type: TCR-20-42087, Work No: 7035912, Mfg: Year: 2016) had been dismantled and New Turbocharger (Type TCR-20-42087, Work no: 7038033, Mfg. Year: 2016).
- 6) Both side camshaft sections and rollers checked, surfaces found in good order.



New piston and liner on No:7 Cylinder Unit

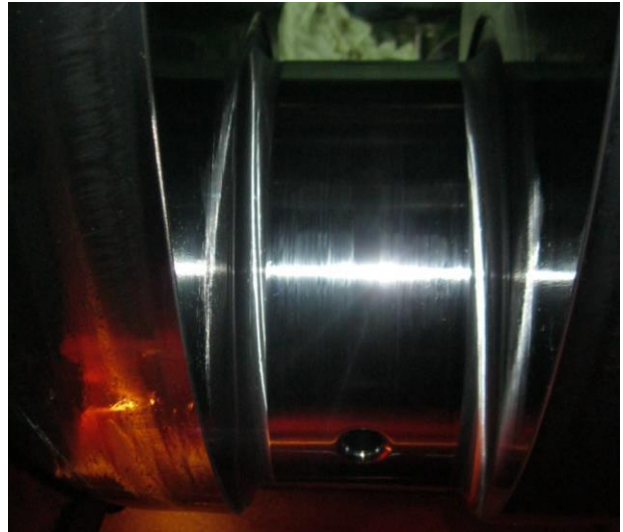


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No:7 Crank Pin and Bearing Condition



No:6 Crank Pin and Bearing Condition



No:4 Crank Pin and Bearing Condition



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No:6, 5 and 4 Cylinder Unit Pistons



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Damaged/New Turbocharger and Installation Works



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