

| TROUBLESHOOTING SCENARIOS | |
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| FORM NO | CRO002. Rev. 2 |
| SCENARIO NAME | Fuel Pressure Low – Fuel Circulation Pump Worn Out |
| SYSTEM NAME | Main & Auxiliary Engines Fuel Supply System |
| Max Time | 10 min |
| SYSTEM DESCRIPTION | <p>The system consists of two supply pumps that supply either HFO or DO from daily tanks via flowmeter into the enclosed circulating system. The fuel within circulating system circulates via circulation pumps through heaters/coolers, automatic and by-pass filter, viscosimeter to generator engine inlet flowmeter and main engine. Continuous fuel circulation is established through main engine and auxiliary generator engines and returned via pressure regulating valve to vent box (mixing tank). Fuel from vent box (mixing tank) is lead to suction valve of a running circulation pump. Consumed fuel from circulating system is refilled into the system with supply pumps. Higher fuel pressure in the system is from discharge side of circulation pumps to the pressure regulating valve. (Fig.1.)</p> |
| Describe the problem | Fuel Circulation Pump No. 1 is worn out and cannot provide enough fuel pressure to running engine. (Low Fuel oil pressure) |
| Preparation | <ul style="list-style-type: none"> • Ensure stand-by pump is ready • Check safety measure |
| SCENARIO ALGORITHM | <p>Scenario chronology:</p> <ol style="list-style-type: none"> 1. Heavy Alarm sound and Signal light column for machinery alarm is illuminated 2. Message on ECR computer panel will appear: “FUEL PRESSURE LOW - 5,8 bar with red letters. 3. Student will have to press ACKNOWLEDGE BUTTON in ECR computer panel 4. The alarm horn will SILENT and light on signal column will go OFF 5. The letters on message on ECR computer panel: “FUEL 6. PRESSURE LOW – 5,8 bar” will go yellow 7. Student will physically have to go find starter for Fuel Oil Circulation Pump No. 1 and Fuel Oil Circulation Pump No. 2. 8. Student will start CIRC PP No.2 on CIRC PP No.2 starter 9. Student will stop CIRC PP No.1 on CIRC PP No.1 starter 10. Student will repair CIRC PP No. 1 11. Messages on ECR computer panel will DELETE: “FUEL PRESSURE LOW – 5,8 bar” <p>FINISHED SCENARIO</p> |
| QUESTIONS | <ol style="list-style-type: none"> 1. What is FO pressure on main engine? 2. What is pressure gauge on FO circulation pump? 3. What was exact alarm message? 4. What did you achieved by starting stand-by pump? |

LEARNING OUTCOME

Can maintain ME FO pressure
To detect and respond to damaged fuel pump
To ensure that student can understand alarm messages