

TROUBLESHOOTING SCENARIOS	
FORM NO	CRO001. Rev. 2
SCENARIO NAME	Fuel Pressure Low – Automatic Fuel Filter clogged
SYSTEM NAME	Main & Auxiliary Engines Fuel Supply System
Max Time	15 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.</p>
Describe the problem	Fuel Pressure Automatic Fuel Filter is clogged (logic unit – differential pressure switch output is digital value – 0/1)
Preparation	<ul style="list-style-type: none"> • Get new filter • 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” and “FUEL FLT DIFF PRESSURE HIGH” with red letters 3. Automatic Fuel Filter Diff. Pressure Gauge will show red instead of white 4. Student will have to press ACKNOWLEDGE BUTTON in ECR computer panel 5. The alarm horn will go ONLY SILENT and light on signal column will go OFF 6. The letters on message on ECR computer panel: “FUEL PRESSURE LOW” and “FUEL FLT DIFF PRESSURE HIGH” with change color to yellow letters 7. Student will physically have to go from ECR to ER in front of automatic fuel filter and check that Fuel filter Diff. Pressure Gauge is red 8. Student will turn handle on main filter for 90° 9. Messages on ECR computer panel will DELETE: “FUEL PRESSURE LOW” and “FUEL FLT DIFF PRESSURE HIGH”. 10. Student will remove filter cover bolts and remove cover

	11. Student will remove filter element and change for clean one 12. Student will re-install new filter element 13. Student will put back filter cover and tight the cover bolts 14. Student will turn back handle on main filter for 90° FINISHED SCENARIO
QUESTIONS	1. What shows FO differential pressure gauge on auto filter? 2. What is FO pressure on main engine? 3. What was exact alarm message? 4. What did you achieved by changing filter?
LEARNING OUTCOME	Can maintain ME FO pressure To detect clogged FO filter To ensure that student can understand alarm messages