

Exercise Plan Template
(Instructor's Copy)

Course Title	Management Level Course for Marine Engineer Officers (Function 1)
Exercise No.	A7. 12
Exercise Title	Supervise the checking of the condition of the main diesel engine if within operating limits
Duration	3 hours
Function	Marine engineering at the management level
Competence	Operation, surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery
Knowledge, Understanding and proficiency	Operating Limits of Propulsion Plant (<i>Practical Knowledge</i>)
Intended Learning Outcome/s	At the end of the exercises, the trainee should be able to supervise the checking of the condition of the main diesel engine if within the operating limits through a given scenario.
Training Equipment	Full Mission Engine Room Simulator
Scenario Description	The vessel is underway. The C/E engineer instructed the 2nd engineer to conduct surveillance, performance assessment and maintaining safety of propulsion plant and auxiliary machinery.
Initial Condition	<ol style="list-style-type: none"> 1. Generator no. 1 is running and connected to the main bus bar. 2. The auxiliary boiler is running in auto mode. 3. The emergency generator is in auto mode. 4. Main air compressor no. 1 is in auto mode. 5. Start air receiver 1 is in normal pressure 6. HFO and DO purifiers are running 7. Main Engine control is in Bridge Control 8. HTFW and LTFW systems normal pressure. 9. HTFW heating secured. 10. Lube oil purifier running in Auto.
Instructor's Action	<ul style="list-style-type: none"> • Before the start of the exercise, ensure that the facilities and equipment are ready; • Check if the right scenarios are loaded and initial conditions are met before commencing the exercise; • Conduct briefing; • Give the trainee enough time to prepare prior to starting the simulation;

	<ul style="list-style-type: none"> • Commence to run the simulation exercise by playing the scenario; • Monitor the performance of the trainees during the execution of the practical exercise; • Remind the trainee of the time left and actions not related to the exercise; • Make sure the simulator runs smoothly without malfunctions; • Complete the performance task done or not done; • Stop the exercise if there is any deviation from the required procedure, then explain the reason and give further instruction; • Conduct debriefing.
Exercise Procedure	
Briefing	<p>Ensure that the following conditions are fully understood by the trainees:</p> <ul style="list-style-type: none"> • The measures to be observed during the execution of the exercise; • The specific intended learning outcomes of the exercise; • The execution of performance criteria; • The attitude, as a management level officer, to be shown by the trainee during practical exercises; • The need to treat the activity as it is a real-life situation; • The best management practices applicable; and • The monitoring and assessment to be conducted during and after the completion of exercise; • Seek clarifications and concerns regarding the instructions given prior commencing the simulation exercise
Trainee's Action	<ul style="list-style-type: none"> • Monitoring the operating conditions of the Main Engine. • Verify Generator no. 1 is running and connected to the main bus bar without alarm. • Confirm Auxiliary boiler is running on auto mode. • Verify Main air compressor no. 1 is on auto mode. • Start air receiver 1 is in normal pressure. • Confirm the HFO and DO purifiers are running normally. • Validate the HTFW and LTFW systems' normal pressure. • Confirm Lube oil purifier is running normally.
Debriefing	<ul style="list-style-type: none"> • Ask the trainees what are the difficulties they encountered during the exercise. • State whether the intended learning outcomes were achieved during the exercise

	<ul style="list-style-type: none"> • Show diplomacy in any objection from the trainees if they have question/s. • Provide the result of the exercise using the checklist provided based on the criteria for assessing the competence; and • Discuss the positive accomplishment as well as the points for improvements if any. • Always be diplomatic in any objection of the trainee and take note of the comment regarding the exercise
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Monitoring Checklist

Trainees should be required to repeat the execution if any of the performance criteria is not done or not acceptable

Performance Criteria	Done	Not Done	Observations / Comments
Supervising the checking of the condition of the main diesel engine within operating limits			
<ul style="list-style-type: none"> • Monitor the operating conditions of the Main Engine. 			
<ul style="list-style-type: none"> • Verify Generator no. 1 is running and connected to the main bus bar without alarm. 			
<ul style="list-style-type: none"> • Confirm the Auxiliary boiler is running on auto mode. 			
<ul style="list-style-type: none"> • Verify Main air compressor no. 1 is on auto mode. 			
<ul style="list-style-type: none"> • Start air receiver 1 is in normal pressure. 			
<ul style="list-style-type: none"> • Confirm the HFO and DO purifiers are running normally. 			
<ul style="list-style-type: none"> • Validate the HTFW and LTFW systems' normal pressure. 			
<ul style="list-style-type: none"> • Confirm Lube oil purifier running normally. 			

Note: This sample practical Exercise Sheet was used during the conduct of pilot testing, MTI may enhance this taking into account the resources they have.