Appendix C
Emergency checklists

Use these checklists as a guide to create tailored company and/or on board checklists to suit the particular needs of the ship type, trade and crew.

Emergency drills and on board training should include scenarios covered in these checklists. During drills and training, emergency checklists will help to ensure an effective response.

In any emergency, several issues require almost immediate attention and these are covered in the following checklists. However, factors such as the design of a particular engine room or the layout of its equipment may mean that some of the steps identified in the checklists should be done in a different order. Even so, raising the alarm, taking immediate action to safeguard the ship and calling the chief engineer should take priority over anything else.

C1 – Engine room fire

Actions by person spotting fire			
Ref	**Check**	**Status**	**Remarks**
1	Alarm raised using the nearest manual call point. ECR informed	☐ Yes	
2	If safe to do so, one attempt made to extinguish using nearest portable extinguisher	☐ Yes	
3	After an initial attempt to extinguish, the affected compartment is isolated if possible and crew evacuate to muster station	☐ Yes	
4	Instructions followed as per the fire control plan*	☐ Yes	
Actions by ECR			
Ref	**Check**	**Status**	**Remarks**
5	Fixed (water/foam/CO_2) firefighting system for the affected space activated	☐ Yes	
6	Fire pump is ON. The relevant isolation valves are open	☐ Yes	
7	Chief engineer and bridge informed of situation	☐ Yes	
8	Main engine control transferred to the ECR	☐ Yes	
9	Main engine slowed down and stopped if the bridge confirms that it is safe to do so	☐ Yes	
10	Engine room ventilation fans switched off. Emergency stops, quick closing valves and ventilation flaps activated as required	☐ Yes	
11	Instructions followed as per fire control plan*	☐ Yes	

* Action required will be in line with the ship-specific fire control plan.

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C2 – Engine room flooding

Ref	Check	Status	Remarks
1	ECR and chief engineer informed	☐ Yes	
2	The source of the leaking water located	☐ Yes	
3	Leaking system changed over if possible and affected section isolated	☐ Yes	
4	Bilges in the affected section pumped out	☐ Yes	
5	If the water level is uncontrollably increasing, the emergency bilge injection valve is opened with the permission of the chief engineer, and the water pumped overboard. Actions recorded in the oil record book and signed by the master and chief engineer	☐ Yes	
6	If any external spills are detected, ship's spill response plan to be followed*	☐ Yes	

* Action required will be in line with the ship-specific spill response plan..

C3 – Grounding

Following stopping of the main engine			
Ref	**Check**	**Status**	**Remarks**
1	Sea suction to high sea suction changed over	☐ Yes	
2	Hull areas inside the engine room inspected and reported to chief engineer	☐ Yes	
3	Normal operation of steering gear checked and confirmed	☐ Yes	
4	All double bottom tanks in the engine room and fuel oil tanks on deck sounded. Soundings repeated regularly and chief engineer informed of any abnormal changes	☐ Yes	
5	Cofferdams are empty	☐ Yes	
6	Firefighting equipment for use (if needed) prepared	☐ Yes	
7	If any flooding is detected, instructions in checklist C2 to be followed. Emergency bilge suction used if required, following permission from chief engineer	☐ Yes	
8	Indicator cocks opened, turning gear engaged and engine turned. Turning gear amperage observed for abnormalities	☐ Yes	
9	Crank web deflections and bearing clearances recorded	☐ Yes	
10	Stern tube lube oil gravity tank level checked and any loss of oil reported to the chief engineer	☐ Yes	
11	All other engine room pipelines inspected for leakages and isolated if necessary	☐ Yes	
12	If any external spills are detected, ship's spill response plan to be followed*	☐ Yes	

* Action required will be in line with the ship-specific spill response plan

C4 – Scavenge space fire

Indications	Status	Remarks
Scavenge space high-temperature alarm activated	☐ Yes	
High-exhaust temperature alarm activated	☐ Yes	
Surging of turbochargers	☐ Yes	
Smoke emanating from turbocharger	☐ Yes	
Sparks or flames coming from scavenge space drains	☐ Yes	
Increased smoke from funnel stack, accompanied by sparks	☐ Yes	

Ref	Check	Status	Remarks
1	Bridge and chief engineer informed. Engineer's call activated	☐ Yes	
2	Main engine control transferred to the ECR	☐ Yes	
3	Engine slowed down	☐ Yes	
4	Scavenge drains of affected unit shut	☐ Yes	
5	Cylinder lubrication increased	☐ Yes	
6	Affected unit cut out	☐ Yes	
7	Engine cooling water temperature setting reduced	☐ Yes	
8	Additional auxiliary engine started and loaded up	☐ Yes	
9	Freshwater generator stopped	☐ Yes	
10	If fire does not die down, bridge is asked for permission to stop engine	☐ Yes	
After stopping engine			
Ref	**Check**	**Status**	**Remarks**
11	Cooling water and lubricating oil pumps continued	☐ Yes	
12	Engine auxiliary blowers stopped	☐ Yes	
13	Turning gear engaged, indicator cocks opened and engine kept turning while ensuring adequate cylinder lubrication	☐ Yes	

14	Turbocharger air suction filter covered to reduce air ingress to the scavenge space	☐ Yes	
15	Fixed firefighting system activated for scavenge space, if fitted	☐ Yes	
16	Portable extinguishers on standby near scavenge doors	☐ Yes	
17	Scavenge temperatures monitored. Once the fire is extinguished, scavenge doors to be opened with utmost care	☐ Yes	
18	Scavenge and under piston spaces thoroughly inspected for any damage, paying special attention to condition of scavenge valves/flaps, piston rings, stuffing box, liner surface and piston rod	☐ Yes	

C5 – Economiser fire

Indications		Status	Remarks
Abnormal rise in boiler pressure		☐ Yes	
Abnormal rise in exhaust gas outlet temperature from economiser		☐ Yes	
Blistering of paint on surface of economiser		☐ Yes	
Increased smoke and sparks from funnel		☐ Yes	
Ref	**Check**	**Status**	**Remarks**
1	Fire alarm activated	☐ Yes	
2	Bridge and chief engineer informed of situation	☐ Yes	
3	Main engine control transferred to the ECR	☐ Yes	
4	The engine feeding the affected economiser slowed down	☐ Yes	
5	Exhaust gas from the economiser bypassed, if possible	☐ Yes	
6	Steam pressure reduced using the easing gear on the safety valves	☐ Yes	
7	Main engine changed over to diesel oil, if required	☐ Yes	
8	Engine stopped immediately, if bridge confirms it safe to do so	☐ Yes	
9	The engine auxiliary blowers stopped and turbocharger air intakes covered	☐ Yes	
10	Running of the economiser circulating pump continued to cool the tubes and to confirm tubes intact. Water level monitored and, if tubes are leaking, pump circulation stopped	☐ Yes	
11	Economiser not to be soot-blown when on fire	☐ Yes	
12	Boundary cooling the surface of the economiser with fire hoses started	☐ Yes	
13	Engine room blowers and close ventilation flaps shut down	☐ Yes	
14	Main engine turbocharger drains and economiser drains opened	☐ Yes	
15	Access to engine room closed and wait for fire to die down	☐ Yes	

C6 – Oil mist in crankcase

Indications		Status	Remarks
Oil mist detector high alarm activated		☐ Yes	
Crankcase doors indicate elevated temperature		☐ Yes	
Bearing temperature monitors (if fitted) indicate high temperature		☐ Yes	
High bearing lube oil temperature		☐ Yes	
Ref	**Check**	**Status**	**Remarks**
1	Location of the affected crank chamber noted if possible, using the above indications	☐ Yes	
2	Chief engineer and the bridge informed	☐ Yes	
3	Main engine control transferred to the ECR	☐ Yes	
4	Engine slowed down and stopped if the bridge confirms it safe to do so	☐ Yes	
5	Bearing lubrication increased	☐ Yes	
6	Fuel pump on the affected unit cut off, if stopping the engine has to be delayed	☐ Yes	
7	Once the engine is stopped, indicator cocks are opened, turning gear engaged and engine turned while noting the amperage drawn by the turning gear. Engine cooling water pumps to remain on	☐ Yes	
8	Adequate ventilation of the engine room ensured	☐ Yes	
9	Crankcase relief doors not to be approached. Firefighting appliances kept ready for operation	☐ Yes	
10	Lubrication and turning of engine to be continued until the crankcase temperatures have reduced	☐ Yes	
11	Once the crankcase has sufficiently cooled, lubricating pump is stopped and crankcase doors opened	☐ Yes	
12	The hotspot is located. This should be indicated by surface discolouration, squeezed-out bearing metal, high temperature at sliding surfaces, etc.	☐ Yes	

C7 – Loss of power/blackout

Ref	Check	Status	Remarks
1	Bridge informed, engineer's call activated	☐ Yes	
2	If standby generator has not started and come on load, it should be started manually or the emergency generator should be started	☐ Yes	
3	Sequential start of all essential machinery confirmed. If not, starting is done manually	☐ Yes	
4	Main engine control changed over to the ECR and all safety trips reset	☐ Yes	
5	Freshwater generator and chemical dosing stopped	☐ Yes	
6	Lube oil pumps started and the engine that has shut down is turned. The cause for shutdown investigated	☐ Yes	
7	Cooling water and fuel oil system to auxiliary engines in order	☐ Yes	
8	Boiler firing in auto	☐ Yes	
9	All auxiliary machinery reset and restarted. Bridge informed that stable power is available to put on navigation systems and radio equipment	☐ Yes	
10	Main engine restarted after all systems confirmed as back to normal	☐ Yes	