TIDEWATER	Engine Room Pre DP, Entering 500m Zone and Watch Change Checklist (Part B Engine Room - Pacific Champion) Rev 0, May 2022	APPENDIX I - PART B
Both sections A (Bridge) and B (Engine Room) must be completed with all sections confirmed before commencing DP operations or entering any 500m Safety Zone.		CHECKLIST NUMBER

Category	Equipment	Maximum Redundancy Set up	√ to Confirm Setup
Set-up of Main Switchboards	440V AC, 220V AC MSB and ESB Set-up	Shaft Generator No.1 online and directly supplying power to the "440V AC Aux Bus 1". The interconnecting bus-tie breaker "**4Q1**" between Aux Bus 1 and Main Bus 1 should be **CLOSED**.	☐
		Shaft Generator No.2 online and directly supplying power to the "440V AC Aux Bus 2". The interconnecting Bus-tie breaker "**13Q1**" between Aux Bus 2 and Main Bus 2 should be **CLOSED**.	☐
		The Bus-tie Breaker; "**9Q2**" in between 440V AC HC Bus 1 and HC Bus 2 should be **OPEN**.	☐
		The Bus-tie Breaker; "**7Q1**" in between 440V AC MSB Main Bus 1 and Main Bus 2 should be **OPEN**.	☐
		The Bus-tie breaker; "**9Q1**" in between 440V AC MSB Bus 2 and HC Bus 2 should be **OPEN**.	☐
		The Bus-tie breaker; "**16Q1**" between the 230V AC MSB Bus 1 and Bus 2 sections should be **OPEN**.	☐
		Diesel generators, DG1 and DG2, should be set to **Manual**.	☐
		The 440V AC emergency switchboard is supplied with power from 440V AC MSB Bus 2. The emergency generator should be set to **Automatic Standby**.	☐
		Selector switch at the Distribution Board **"L3"** should be on "**POS2**" to **Isolate** the automatic changeover facilty so that the 230V AC Distribution Board "**L3**" only supplied with power from **230V AC MSB Bus 1**.	☐
		All 440V, 230V switchboards to be free of active earth faults.	☐
Main Propulsion Thrusters, Tunnel Thrusters, Azimuth Thruster and Rudde	Main Propulsion Thrusters CPP / Main Engines	Both main engines are running and the port and stbd main propulsion thrusters (PortMP & StbdMP).	☐
		Ensure all elements in the hydraulic oil system for the both propulsion thrusters CPP's are operational, servo oil cooler, directional valve block, oil distribution ring and both servo pumps.	☐
		The electrical driven standby gearbox servo / lube oil pumps are set to **Auto**.	☐
	Bow Thrusters	Bow Thrusters (Bow1 & BowAZ) are online.	☐
		Ensure all elements in the lube / hydraulic oil system for the Bow Thruster No.1 (Bow1) is operational, gravity/pressurized header tank and seal tank levels, and hydraulic module.	☐
		The hydraulic pump for Bow Thruster No.1 (Bow1) are supplied with power from the respective thruster starter panel. The selector Switch "**S10**" should be selected in **Normal Mode**.	☐
		Ensure all elements in the lube / hydraulic oil system for the Bow Retractable Azimuth Thruster (BowAZ) is operational, gravity/pressurized header tank and seal tank levels, LO pumps, steering motor, oil cooler, pitch control valve and steering control valve	☐
		Selector switch at MSB Cell No.6 should be on **POS2** so that the Bow Retractable Azimuth Thruster and Changeover Cabinet supplied from Shaft Generator No.2.	☐
		Selector switch at MSB Cell No.7 should be on **POS1** so that 24V DC Power Supply from **DC31 Off** and **DC41 ON** for the Bow Retractable Azimuth Thruster (BowAZ) breaker and other consumers.	☐
		Selector switch at BowAZ VFD should be on **POS2** to **Isolate** the automatic changeover facilty and VFD is only supplied with power from 230V AC DB "**L8**".	☐
	Stern Thrusters	Both Stern Thrusters (Stern1 & Stern2) in online.	☐
		Ensure all elements in the lube / hydraulic oil system for the both Stern Thrusters (Stern1 & Stern2) are operational, gravity/pressurized header tank and seal tank levels, and hydraulic module.	☐
		The hydraulic pump for the Stern Thrusters are supplied with power from the respective thruster starter panel. The selector Switch "**S10**" should be selected in **Normal Mode**.	☐
	Rudders	Both rudders (PortR & StbdR) are online and both motor controller pumps online for each rudder.	☐
	Full Load Test	Main engines are operational and tested to 100% load as per ORBIS PMS.	☐
		Both Bow Thrusters (Bow1 & BowAZ) and both Stern Thrusters (Stern1 & Stern2) operational and tested to 100% power as per ORBIS PMS.	☐
HVAC	Ventilation	Both Engine Room Fans should be in online and supplying air to the ER and all fire dampers should be **OPEN**.	☐
		All other machinery space fans should be running as necessary, and the fire dampers should be **OPEN**.	☐
	Air Conditioning	Adequate cooling of DP computer area on Bridge, Instrument Room, Switchboard Room and ECR.	☐
	24V DC Systems	The 24V DC Systems; **"DC10"** and **"DC30"** are operated with only one charger / rectifier unit online. The power supply for Battery Charger No.2 at **'DC10'** and **'DC30'** should be **Isolated**.	☐
		The 24V DC Systems; **"DC20"** and **"DC40"** are operated with two charger / rectifier units online.	☐
		The Bus-tie breakers between **"DC10"** and **"DC20"** should be **OPEN**.	☐

DP UPS's and 24V DC Systems		The Bus-tie breakers between **"DC30"** and **"DC40"** should be **OPEN**.	☐
		24 Volt distribution to be free of active earth alarms.	☐
	DP Power Supply	Both DP UPS units fully functional, not operating on bypass.	☐
	Batteries	DP UPS units and both 24V DC batteries load tested for 30 minutes as per ORBIS PMS.	☐
		The 24V DC Systems & DP UPS batteries must be at optimum charge level before entering 500m.	☐

TIDEWATER	Engine Room Pre DP, Entering 500m Zone and Watch Change Checklist (Part B Engine Room - Pacific Champion) Rev 0, May 2022	APPENDIX I - PART B
	Both sections A (Bridge) and B (Engine Room) must be completed with all sections confirmed before commencing DP operations or entering any 500m Safety Zone.	CHECKLIST NUMBER

Category	Equipment	Maximum Redundancy Set up	√ to Confirm Setup
Auxiliary Systems	Fuel Oil Transfer System	Cross-over valves; "**702.1533**" and "**702.1953**" between the inlets to the fuel oil separators should be **CLOSED**.	☐
		Cross-over valves; "**702.1564**" and "**702.1943**" between the outlets and recirculation lines from the fuel oil separators should be **CLOSED**.	☐
		Inlet valves; "**701.1701**" and "**701.1721**" to the fuel oil service tanks from the fuel oil transfer pumps should be **CLOSED.**	☐
		Cross-over valve; "**701.1693**" between the discharge lines of FO Transfer Pumps No.1 and No.2 should be **CLOSED**.	☐
	Fuel Oil Services System	Each main engine fuel oil standby pump should be set for **Automatic Start**.	☐
		Cross-over valves; "**703.1012**" and "**703.1041**" between the supply lines to the main engines should be **CLOSED.**	☐
		Cross-over valves; "**703.1182**" and "**703.1492**" between the supply and return lines for the for the diesel generator engines should be **CLOSED**.	☐
		Fuel for the Hot Water Boiler will be periodically taken from the Port FO Service Tank. The outlet valve; "**703.1411**" at the Port Service Tank should **OPEN**, the outlet valve; "**703.1401**" at the Stbd FO Service Tank should **CLOSED** and the inlet valve; "**703.1491**" at the Starboard FO Service Tank should be **CLOSED**.	☐
	Sea Water Cooling System	Main SW Cooling Pumps No.1, No.2 & No.3 are running and servicing the respective Central Coolers.	☐
		Cross-over valves; **"721.1151"** and **"721.1152"** between the discharge lines of Main SW cooling pumps No.1 and No.2, and backup SW cooling pump are **CLOSED**. The St-By SW Cooling Pump should be ready to put on line.	☐
		The system should be operated with the sea water inlet to the sea water crossover trunk from **Either the High or Low Sea Chest** and not with both suctions open simultaneously.	☐
		Cross-over valve; **"721.1161"** between the discharge lines of main SW cooling pumps and back-up SW cooling pump is **CLOSED**.	☐
		Cross-over valves; **"721.1281"** and **"721.1291"** in between ER SW cooling system and LP AH / TW system should be **CLOSED**.	☐
	Fresh Water Cooling System	Main LTFW Circulating Pumps No.1 and No.2 are online circulating the cooling water in respective FW Cooling Systems No.1 and No.2.	☐
		Cross-over valves; "**722.2312**", "**722.1301**", "**722.2131**" and "**722.2101**" between Fresh Water Cooling System No.1 and Fresh Water Cooling System No.2 should be **CLOSED**.	☐
		Cross-over valve; "**722.3532**" (System No.3) should be **CLOSED**, and other crossover valves configured according to the cooling requirements of the system.	☐
		Expansion tank levels should be periodically monitored, each expansion tank is provided with low level alarm indication.	☐
	Main Lubricating Oil Systems	The LO and Servo Oil Standby pumps for the propulsion thrusters should be set for **Automatic Start**.	☐
		Filling valves; "**711.1031**", "**711.1041**", "**711.1121**" and "**711.1131**" from the LO Tank (Main Engines and Main Gear) to each main engine and gearbox sump tank should be **CLOSED** during DP operations.	☐
		Cross-over valves; "**712.3505**" and "**712.3535**" between the inlet lines to the LO separators should be **CLOSED**.	☐
		Cross-over valve; "**712.3551**", between the discharge lines from the LO separators should be **CLOSED.**	☐
	Compressed Air Systems	Both starting air compressors are online and set to auto. Working air compressor should be in operation and set to **Auto**.	☐
		Cross-over valve; "**730.1061**" between the starting air supply lines to the main engines should be **CLOSED**.	☐
		Crossover valve; "**730.1181**" between the starting air system and working air system, and "**730.1144**" between the starting air system and instrument air system, should be **CLOSED**.	☐
		Cross-over valve; "**730.1251**" between the instrument air system and the inlet of the ME control air dryers should be **CLOSED**.	☐
		Cross-over valve; "**730.1242**" between the instrument air system and the outlet of the ME control air dryers should also be **CLOSED**.	☐
		Starting air system should supply control air to both main engines via the pressure reducing panel and the respective air dryer units. Crossover valve; "**730.1241**" should be **CLOSED**.	☐
DP Drills, Maintenance, Clock, Manning, Alarm & Monitoring System and Others	DP Drills	DP drills conducted as per Drills Matrix / HSE_Drills_And_Exercises (HOF-QHSE-DOC-034/Emergency Drills) - not overdue at location arrival i.e. Black-Out / Main Switchboard Failure Drills.	☐
	DP Related Maintenance	No maintenance on any equipment that forms part of the vessels DP system. For the avoidance of doubt this means all equipment listed as part of the CAM / DP checklists.	☐
	AMS	All control, alarm and monitoring system functioning.	☐
	Thruster Rooms	Thruster rooms checked before entering 500m Safety Zone and at regular intervals wile on DP Operations.	☐
	Engine Room Manning	The Engine Control Room should be manned at all times with a certified watch keeper whenever the vessel is carrying out DP operations. However, engineer is allowed to enter the machinery space in order to make rounds and/or attend gear after an	☐
	DP and IAS Clock Synchronised	Adjust both systems clocks in such they operate synchronised.	☐

	Date / Time	Signature	Time Checklist Completed	
Engine Room Duty Engineer			**Time On DP**	
Chief Engineer (if required)			**Time Off DP**	
Client / OIM (if required)				