THE FLEET TODAY

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Introduction

Commander-in-Chief Fleet is responsible for the operation and maintenance of platforms and systems. To do this at all, let alone to do it well, needs experience and expertise; experience and expertise as leaders—call it man management if you wish—and as engineers. None of this comes easily.

Experience teaches us to be broad-minded, to be flexible, to react constructively to change, but to fight our corner if needs be; it teaches us to respond positively to challenge and to use flair, imagination and initiative—as well as expertise—in dealing with it; it teaches us that second-best is never good enough and that we must always seek QUALITY. In recent times the Royal Navy's experience and expertise has been put to the test in different ways.

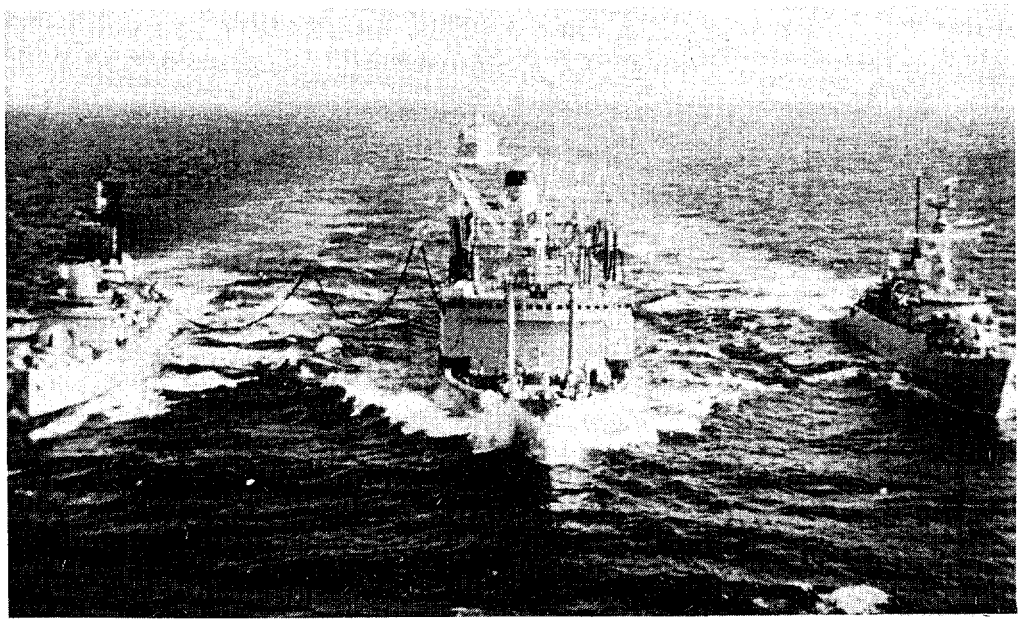

FIG. 1—GROUP REPLENISHMENT AT SEA

To tell you of some of the problems we face daily and of how we cope, we will now describe a fictitious Group Deployment which will draw on actual events and incidents that have occurred in the last twelve months or

so. The group concerned was Group Gamma destined for an out-of-area deployment to an imaginary island south of the equator.

Deployment to Nitsua Island

Group Gamma comprised H.M.S. *Bath,* a Type 42; H.M.S. *Attractive,* a Type 21; H.M.S. *Zeus,* a Batch 3 Leander; and H.M.S. *Stupendous,* a nuclear attack submarine. R.F.A. *Blodwen* would accompany the Group after departure from Gibraltar.

Preparation

The Group prepared for deployment at Devonport, Portsmouth, and Faslane. The participation of the SSN was initially uncertain due to refit slippage. All the ships were planned to carry out a pre-deployment maintenance period and the surface ships would continue to Portland for Weapon Training. The Type 42 Assisted Maintenance Period was conducted by the Rosyth Fleet Maintenance Unit at Portsmouth so as to give them experience of the Class prior to the revised base porting plans coming into full operation. This exercise was entirely successful and left the Rosyth team confident in their ability to meet their future task.

The programme to deployment was very tight and allowed little time for a shakedown period to iron out the bugs or deal with the unforeseen. *Zeus* had an extensive weapon enhancement programme immediately prior to the Maintenance Period, including the fitting of some new communications equipment. The *ad hoc* installation of several equipments caused radio interference problems and an unprogrammed mutual interference trial had to be carried out.

H.M.S. *Bath* had trialled a new ADAWS program during her Maintenance Period, but it could not be used operationally because it was discovered at the last minute that proper sea trials schedules had not been written.

H.M.S. *Attractive* had already been fitted with an A & A which consists of a bolted beam down both sides of the ship to reduce the hogging and sagging of the hull and to counter the cracking of the aluminium superstructure on 01 deck. Nevertheless, some further cracking was discovered during her Maintenance Period.

Ship's Staff and Fleet Maintenance Group personnel were seriously stretched in undertaking lagging and ship husbandry tasks, although the use of C-in-C Fleet's ship husbandry fund to hire plant proved helpful. This stretch was due to leave requirements during the maintenance period and limited dockyard resources.

The main defect facing *Stupendous* was the repair of a 300 kilowatt motor-generator set which had failed catastrophically. However, with assistance from the manufacturers, the rotor was repaired in position because there was no method of getting it out of the submarine.

All ships checked their outstanding stores demands and chased critical items; however the only way of satisfying many was by STOROB. Whilst this action ensured the timely deployment of the Group, other ships in refit and maintenance had their programmes disrupted. The combination of leave, inadequate berthing facilities, lack of ship services—there had been chilled water problems in two of the ships—and the shortfall of spares all meant that weapon systems were not run up in enough time to sort out the problems before sailing.

The Lynx of *Attractive* suspected a Gem bearing failure, which was found during a routine examination of magnetic plugs, and subsequently confirmed by the Oil Analysis Programme. This necessitated an engine change which brought into sharp focus the critical shortage of spare engines.

Weapon Training Period

The surface ships sailed for weapon training at Portland and disaster struck—*Zeus's* Seawolf system failed even though the missile left the launcher. CSO(E) Devonport co-ordinated Dockyard and contractor effort but no solution was found so the Fleet stand/by, H.M.S. *Lucretia,* a batch 2A *Leander,* was activated to join the Group. It was a regrettable but unavoidable fact of life that *Lucretia* had only recently returned from a similar out-of-area deployment and this only underlined the widespread concern felt at the critical balance between the hulls available and the tasks the Fleet is required to undertake.

Meanwhile it was reported that *Stupendous* had successfully fired R.N. Sub-Harpoon and had also proved to be a very quiet submarine on the noise range. The noise ranging and firing gave assurance to the Commander of the Task Unit (CTU) that he had a fully operational SSN available to him.

Whilst carrying out a propulsion change from Olympus to Tyne in H.M.S. *Bath* the port Tyne clutch failed as the engine was selected. The assistance of the Fleet COGOG team was requested and they soon confirmed the failure of the secondary pawls and agreed that a clutch change had to be undertaken (FIG. 2). The stores demand was met, and the Portland FMG undertook the job. Within 3½ days it was completed and *Bath* sailed with the Fleet Vibration Analysis Team embarked to confirm the full serviceability. The work was completed in a timely and efficient manner in spite of the frustration of having to read drawings on a microfiche viewer.

The surface ships finally set sail for Gibraltar in good heart, despite the many set-backs.

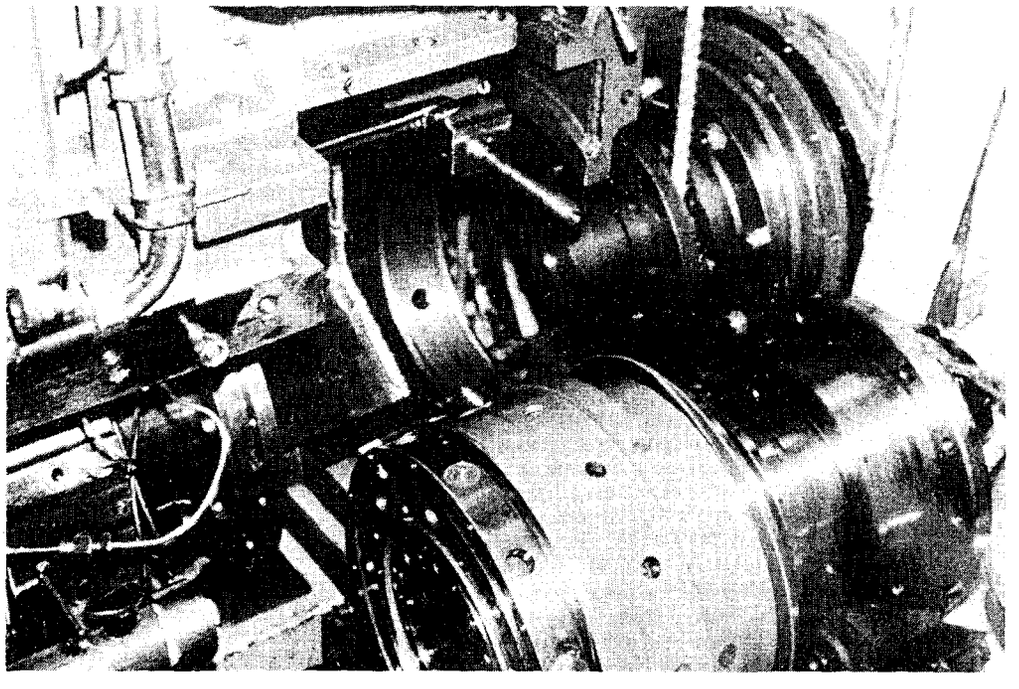

FIG. 2—TYNE SSS CLUTCH CHANGE

Passage to Gibraltar

En route to Gibraltar the Group was joined by *Stupendous* but, shortly afterwards, she was withdrawn by C-in-C Fleet to search for and shadow a Soviet SSN.

The Group next met up with a CVS, H.M.S. *Indeterminate,* for a PASSEX, the first phase of which was to concentrate on Air Defence and Electronic Warfare using her Sea Harriers and Airborne Early Warning Sea Kings. The Sea Harrier had proved to be a most effective air defence aircraft using Sidewinder AIM 9L missiles which gave an extremely high success rate in air-to-air combat. The CTU was heartened by the re-introduction of organic AEW in the form of Searchwater Radar fitted in the modified Sea Kings.

Unfortunately, just as the exercise was getting underway, one of the aircraft lifts in H.M.S. *Indeterminate* failed. During a routine change of the jigger wire pulleys on the after lift, a partial runaway occurred. The subsequent investigation revealed a number of important oversights in the quality control at build and the lack of a fail-safe device for the hydraulic lifting arrangement. As a result *Indeterminate* was unable to operate fixed wing aircraft. Fortunately she had not suffered the shaft 'A' bracket defect of her sister ship.

The curtailment of the Electronic Warfare exercise was fortuitous—H.M.S. *Bath's* jammer had failed but this time there were no spares available from ships of lower operational priority. This incident highlighted the penalties for rushing the latest equipment into service without adequate testing and support facilities.

To gain some benefit from the PASSEX an anti-submarine phase was instigated. A continuous ripple 3 of Sea King MK. 5 was planned against the SSN to provide much needed work-up and in-contact time for crews in both passive and active operations. The combination of a towed array frigate and Sea King worked well and a valuable training period was completed.

The Group departed the exercise and planned for a fast speed of advance to Gibraltar. The Commanding Officer of *Stupendous* expressed concern that if these high speeds were maintained throughout the deployment, it could well give him a long-term problem of nuclear fuel consumption. The MEO of *Lucretia* was satisfied that his ageing ship was standing up well to the rigours of the exercise despite the changes to the refitting cycles which had reduced the opportunities to carry out remedial work on the pressure parts of the LEANDER main boilers.

As the Group approached the Straits of Gibraltar *Attractive* developed a severe vibration in her port main shaft. It soon became clear that she had lost a propeller blade. This was not an unknown defect in the class and previous failures had pointed to a casting flaw at the neck of the blade. *Attractive* continued towards Gibraltar on one shaft.

Arrive Gibraltar

On arrival at Gibraltar the first priority was to repair the propeller defect. In order to save time and money by avoiding an unprogrammed docking, the Fleet Clearance Diving team were flown out from the U.K. to undertake some underwater engineering. The team was becoming well practiced in blade changing and the whole evolution was accomplished over a weekend and without mishap.

Whilst in Gibraltar the opportunity was taken to rectify OPDEFs that had arisen on passage. It was fortuitous that all ships and the submarine had been fitted with OASIS I. The Engineer Officers had all found the ability to query the stock record file to identify on-board spares most valuable in their maintenance planning.

Set Sail Gibraltar

The Group set sail from Gibraltar for a rendezvous with R.F.A. *Blodwen*. At this stage *Lucretia* sought dispensation to use her RAS highpoint which was out of date for test. There was an increasing backlog of outstanding tests due in part to the loss of testing facilities at Gibraltar and Chatham.

A comprehensive air defence and firing exercise was planned for the next day but minor problems in two of the chilled water plants in H.M.S. *Bath* had to be overcome first. The 20 mm and 30 mm BMARCs, fitted as part of the Weapon Enhancement package, performed well. The 4.5 Mk.8 demonstrated the increased reliability resulting from recent modifications, although there were two misfires.

Arrival at Nitsua

After joint exercises with a United States Task Force the Group arrived on station.

The Type 21 and the LEANDER assumed patrol duties and rendezvoused with the R.F.A. *Fort Northwood*. This class was well equipped with facilities for the Sea King Mk. 5 and had proved to be most valuable as a means of enhancing the numbers of ASW aircraft available to the Task Unit Commander.

In the meantime the Type 42 berthed alongside the forward repair ship, which had been taken up from trade, to assess the state of one of her Tyne engines. The support given by the resident maintenance party was invaluable in assessing the problem. Clearly the power turbine bearing was breaking up and an engine change was called for. Although this was completely within the capability of the ship's staff and the resident support team, it gave the Gas Turbine Allocation Authority a headache in finding a spare Engine Change Unit.

With his ship undergoing a Tyne engine change, the Task Unit Commander was able to sit back and think about the success or failure of the deployment to date. Although beset with many difficulties and always fighting against the odds, he was well pleased with the leadership shown by his officers and senior ratings, that morale had remained high, and that many problems had been solved one way or the other. But, he thought, if only he had more resources, if only ship and weapon systems were more reliable, if only ... if only.

The Message

Our resources are limited, and we must therefore make the most of what we have.

The keyword is QUALITY and, above all, quality in performance, in the way we do things and it is to this end that one of our major tasks must be to enhance quality in the specification, design, production, assembly, installation, setting to work, operation, maintenance, and repair of our platforms and systems. This should bring increased reliability in its wake and with that we would all be happier.
