

CHAPTER 3

WEAPON ENGINEERING DEPARTMENT STANDING ORDERS

ENGINEERING

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0301. HAZARDS

a. The Health and Safety (H&S) at Work Act 1974 (HSWA) places a formal responsibility for H&S on all personnel; it places a 'duty of care' on Commanding and Superior Officers to ensure that the workplace is safe and that all personnel are suitably qualified and equipped. It is the duty of all officers and ratings to take care of themselves and those with whom they work.

b. Particular care is to be taken when other military, contractors or other civilians are onboard. Sponsors are to ensure that a Ship Safety brief is given on arrival.

c. **WE Department Health and Safety Officer.** WO(WPNS) (WOWE) is the WE Department Safety Representative (DSR). Anything in the WE Department which is considered to affect safety in any way is to be brought to the attention of the DSR.

d. **Hazard Statements.** The Ship's COSHH organisation includes Hazard Statements on all hazardous substances held within the WE Department. On the door of each compartment is a statement of the hazards within that compartment, both from COSHH items and from high voltages, hydraulic supplies, pressure vessels or high pressure air supplies.

e. **Hazardous Material Disposal.** Hazardous Material Disposal Kits are located in the Ship's EMR, CRO, No1 Naval Store, CCR (LP), Aft 911 Tracker Office, Fwd 911 Tracker Office, EWO, SCOT Office, Small Arms Workshop, CBRNDC Store, Fwd SIS and the Aft SIS. Thallium Protective Clothing and GWS 60 (Harpoon) JP10 Spillage Kits are contained within Conventional Weapons Incident Lockers, locations are detailed in the extant CWI XTM.

f. **Radiological Hazards.** A large range of radioactive items are held on board. These are detailed in the ship's Radioactive Source Register. The nature of the business of the department means that WE personnel are highly likely to be working in close proximity to the majority of the sources listed. All WE personnel should therefore be fully conversant with the hazards and precautions associated with such stores and in particular, the actions to be taken in the event of breakage. Examples are: SIRS Detector Heads; Smoke Detector Heads (GWS 26); Gaseous Tritium Light Sources (GTLS) (SA80 sights, Bridge and SCC Pitch Control Levers, RC35 gunsights) and radioactive electronic valves.

g. **Ionising Radiation** is produced by electrical equipment in which charged particles are accelerated through a potential difference of more than 5 Kilovolts. Examples are: SCOT, RT996 and RT911, Radar display JUF, Sonar displays for S2050, S2087 and S2090. Regular briefings are to be given as part of the WE training programme regarding precautions and actions to be taken to minimise the risk from hazards.^{1 2 3}

0302. Spare

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1. BRd 167
 2. BRd 9600
 3. T23 MEDSOs

0303. Workshops and Facilities

- a. The following workshops exist:
- (1) Engineers' Workshop (2H).
 - (2) Electronic Maintenance Room (3J).
 - (3) Air Electronic Maintenance Room (2J)⁴.
 - (4) 30mm Workshop (01G).
 - (5) Shipwright Shop (1G).
 - (6) Filter Cleaning Compartment (2J).
 - (7) 4.5 Weapons Lobby (1AC).
 - (8) Small Arms Workshop (1AB) (4.5" Mk8 MOD 1 Gun only).
- b. All compartments are to be left tidy and secure on completion of work and at the end of the day. Correct workshop practices are to be followed at all times.

0304. Tool Kits and Test Equipment

- a. A Senior Rating is nominated by WEO, and annotated on the Family Tree and W&SB under 'other duties', as Departmental Supervisor for tools and as controller of test equipment. Issues are made as follows⁵:
- (1) *RATS Brief Cases*. Held on PLR by Section Senior Ratings (LHs when authorised by the WEO) and issued to section personnel on temporary loan.
 - (2) *Workshop Support Boxes*. Held on PLR by Section Senior Ratings (LHs when authorised by the WEO) and issued to section personnel on temporary loan.
 - (3) *Special to Type Tools*. Held on PLR by Section Senior Ratings (LHs when authorised by the WEO) and issued to section personnel on temporary loan.
 - (4) *General Purpose Test and Measurement Equipment (GPTME)*. Held on PLR by GPTME Manager and issued to personnel on temporary loan.⁶
 - (5) *Special to Type Test Equipment*. Held on PLR by the Section Senior Ratings (LHs when authorised by the WEO) and issued to personnel on temporary loan.
- b. The DWESR/DWETR is to control access to tools and test equipment outside of normal working hours during his/her duty. No other tools are to be held in the Department.

4. Not used as workshop if compartment converted to accommodation.
5. BRd 1313 Chapter 7
6. BRd 1731

0305. Routine Operation of Equipment and Keep Alive

a. For some periods alongside it may be prudent or necessary to keep equipment live. Section Senior Ratings are to discuss the requirement and preference to keep alive their equipment with the WO(s)/DWEO/WEO, taking into account the Notice for Sea or Operational Notice⁷.

b. This requirement should be promulgated in the WEO's Night Order Book or a WEDTM for leave periods.

0306. Water Cooled Equipment

In the event of cooling water failure, Command approval is to be sought to shut the equipment down as quickly as possible. Cooling systems should not be isolated without first consulting the ME Department.

Table 3-1. Water Cooled Equipment Location

COMPARTMENT	LOCATION	EQUIPMENT	REMARKS
EWO	02E	UAT	CHILLED
FWD SIS	3C	S2050	CHILLED
OPS ROOM	3E	S2050 Display	CHILLED
CCR(HP)	2E	ICS 6	CHILLED
SCOT	02E	SCOT	CHILLED
FWD TRACKER	02E	RT911 FWD	CHILLED
AFT TRACKER	01J	RT911 AFT	CHILLED
CRO	01E	RT996/LFE	CHILLED
FOREMAST	04/05E	UAT/RT 997	CHILLED
SDR	3E	S2087 (if fitted)	CHILLED
4.5" HYDRAULICS	1 A/B	4.5" MK8 MOD 1 GUN	CHILLED
AFT SIS	3L	S2087 (if fitted)	CHILLED
WINCH WELL	3M	S2087 (if fitted)	SALT

0307. Shore Telephones

a. A maximum of 12 external telephone lines can be connected. They are to be allocated in the following order: Quarter Master, Exchange, Commanding Officer, Wardroom, Ship's Office, Combined Technical Office, Stores Office and then as determined by the Command. When the ship is in her Base Port, telephones must be connected in accordance with the standard numbering plan.

b. **Connection.** Rigging of telephones is normally to be undertaken by the Internal Communications Section as soon as possible after arrival. Telephone numbers are to be displayed on the Wardroom and Ship's Company notice boards, with individual copies passed to key personnel that require the information. Details must also be communicated to the Master Update Centre once the telephone lines are connected.

c. **Disconnection.** Unrigging is normally to be undertaken by the Internal Communications Section except during cold moves over the weekend or leave period when this task will be undertaken by the WE Duty Watch. The shore supervisor/exchange is to be informed 30 minutes before sailing. A warning pipe is to be made 20 minutes before sailing and having obtained the Commanding Officer's permission, the lines are to be disconnected 15 minutes before leaving the berth or as detailed on WEO's Night Order Book.

7. BRd 8593 (15) and BRd 300(1) [Chapter 4](#).

0308. Entertainment Services

The maintenance of equipment associated with the Ship's entertainment services is the responsibility of a nominated rating iaw the WE Family Tree. They are to ensure that all DET(WE) personnel have a working knowledge of these systems so that they can switch them on and carry out first line maintenance. Training of the SRE and TV operators is the responsibility of the Entertainment Manager in close liaison with the maintainer. They are to ensure that all DET(WE) personnel are able to tune the SRE.

0309. TAGOUT

- a. All personnel are to be fully conversant with the rules relating to Tag-Out Procedures⁸. A combined WE/ME Tag-Out Board, with corresponding WE/ME Tag-Out Log, is to be utilised.
- b. With LETs being given greater responsibility for the maintenance, diagnosis and repair of systems and equipment this requires a greater degree of autonomy. The ability to initiate and authorise Tag-Outs recognises the increased levels of responsibility being vested in LETs, whilst ensuring that mandated safe systems of work are maintained. Therefore technical Senior Ratings and Leading Engineering Technicians may initiate a Tag-Out provided they have passed an assessment of competence and are formally endorsed. This is to be annotated in the Competency Log (ME) or WE Training Log.⁹

8. BRd 167

9. RNTM 009-14 Revision to the Tag-Out Control System: Authorisation by General Service Leading Engineering Technicians (LETs)