SECTION 3
HE SHELLS, BOMBS AND MINES AS DEMOLITION

0301. **Use**. Shells, bombs and mines can be used as concussion charges, mined charges, pressure charges and booby traps. They are unsuitable as cutting charges where close contact with the target is essential.

Selection and Initiation

0302. **Shells**. The explosive content of shells is very small compared with their total weight (even in HE shells only about 10 per cent of the total weight is HE). Generally speaking only heavy caliber HE shells are marked with a yellow cap; green, grey, and black caps indicate smoke, gas and solid shot respectively.

0303. The effective way of initiating an HE shell is to unscrew the fuze or plug very carefully (always use the special spanner made for the purpose if obtainable and never attempt to loosen with a hammer), remove to gaine (the tube containing the detonator and primer for the bursting charge and situated below the fuze), and substitute a 1-oz CE primer with detonating cord, buried well in the charge. An alternative but less reliable method is to fix 2 pounds of slab or plastic HE as a cutting charge against the thinnest part of the wall of the casing (about half-way between base and nose cap). If the HE filing are lyddite or TNT the detonation of one of a group of shells placed in close contact is sufficient to fire all; if the fillings are amatol each shell must be initiated independently. If in doubt the advice of an Ordnance ammunition expert should be sought.

0304. **Bombs**. Unexploded bombs dropped from aircraft will not be used as demolition charges. General purpose or blast bombs contain the greatest proportion of HE to total weight (in the case 500 and 1,000 lb bombs it is about 50 per cent) and are the type most suitable. They can be recognized by the parallel sides of the case and comparatively snub nose. Armour piercing bombs have streamline cases and long pointed noses and are of little use for demolition purposes.

0305. **GP Bombs can be Initiated from the Following Points:**

a. The fuze pocket, which may be located in the nose, side, or tail. If the pocket contains the standard booster charge, but no fuze, pack a 1-oz primer in close contact with the booster charge. If the pocket contains neither booster charge nor fuze, load it with one pound of plastic HE for normal initiation. If a fuze is in the pocket do not attempt to initiate by an external charge over the fuze, but select method (b) or (c) below.

b. The main filling usually reached from a filler cap under the tail cowling.

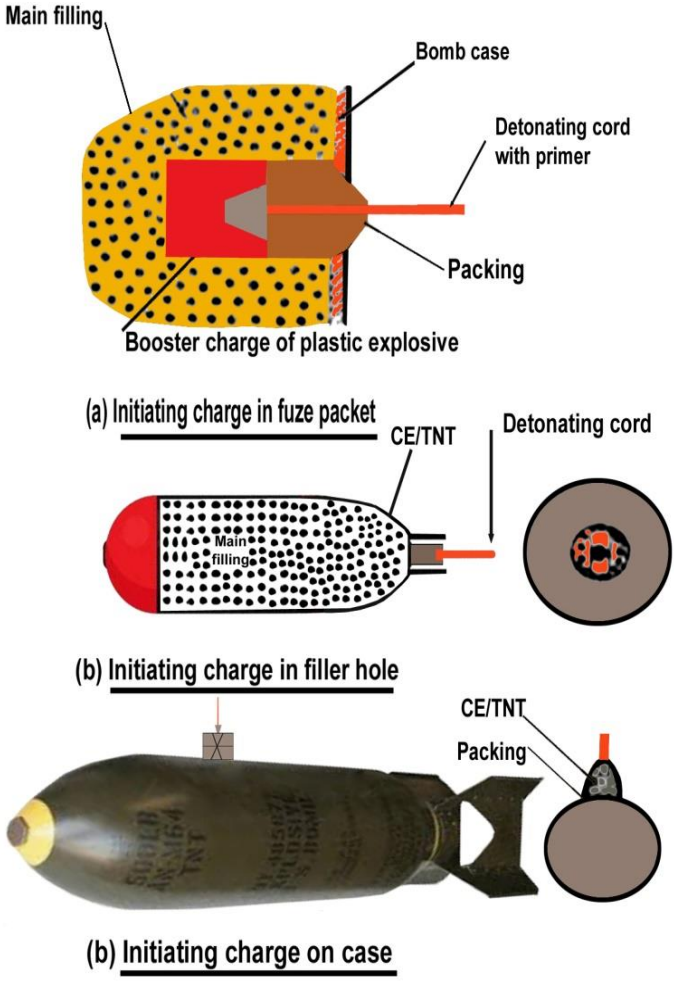

Figure 3-1: Preparation of bombs as demolition charges

Unscrew filler cap by steady pressure (never attempt to force it open) and pack in a 1-lb charge against the main filling.

c. **The Bomb-Casing**. Apply a stacked cutting charge to the thinnest part of the wall and initiate in normal fashion. The size of the initiating charge depends on the thickness of the wall which in turn, is related to its total weight. A rough guide is:

(1) 100-Ib GP bomb ….2 lb stacked "2 slabs" thick,

(2) 250-lb GP bomb …. 4 lb stacked "2 slabs" thick,

(3) Over 250 lb GP bomb…. 9 lb stacked "3 slabs" thick.

0306. The methods of initiating bombs are shown in figure 3-1.

0307. **Mines**. Heavy anti-tank mines contain 15 to 20 pounds of explosive, light anti-tank mines 10 to 15 pounds. Information about latest designs in use can be obtained, in active operations, from Intelligence Summaries.

0308. Initiation should normally be effected by removing the fuze and packing the fuze-well with plastic HE. Alternatively, strap a 1-Ib charge to the mine on the side opposite to the fuze-Well. Do not try to initiate the mine by means of its fuze and do not use this method to demolish mines already laid in the ground.

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