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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

BOMB, GAS, NONPERSISTENT, 750-LB., MC-1

Ref.: TM 3-250, TM 3-304/TO 14P3-1-9, TM 3-400/TO 11C2-1-1,
TM 9-1980; TB 9-1980-57; AR 700-1300-3

Headquarters, Department of the Army, Washington 25, D. C.

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SECTION I

INTRODUCTION

1. **Scope.** This bulletin contains a description of the MC-1 750-pound nonpersistant gas bomb and information on its use, assembly, disassembly, functioning, and handling.

2. **Bombing Tables.** Use bombing tables for the T54E3 (M117) 750-pound demolition bomb as interim bombing tables for the MC-1 750-pound gas bomb.

3. **Use.** The MC-1 gas bomb is designed for

internal or external carriage on bomber and fighter-bomber type aircraft utilizing single or double lug suspension; for release at altitudes up to 60,000 feet at indicated air speeds up to 600 knots; and for release at low altitudes by fighter-bomber aircraft using low-altitude bombing systems.

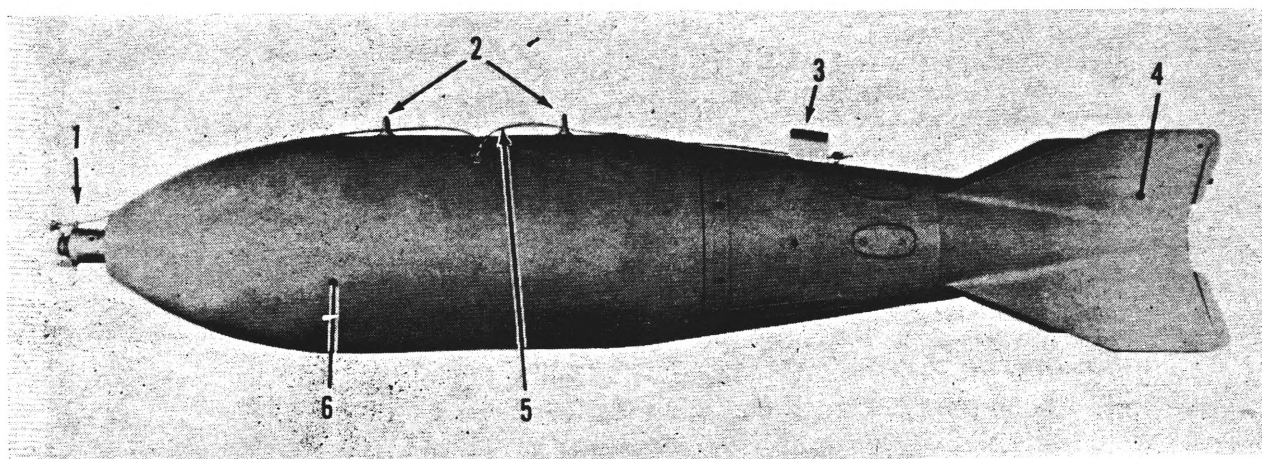
4. **Reports.** Malfunctions and accidents involving gas bombs must be reported as required by AR 700-1300-8.

SECTION II

DESCRIPTION

5. **General.** The MC-1 gas bomb (fig. 1) is essentially a T54E3 (M117) demolition bomb modified to accommodate a liquid chemical filling and a burster. The maximum overall length of the bomb including the nose fuze and the fin assembly is 90 inches; the greatest diameter is 16 inches. The complete round consists of a bomb body (6), a T152E2 (M131) fin assembly (4), a T10 arming wire (5), two suspension lugs (2), a nose fuze (1), adapter-boosters, an internal burster, liquid chemical filling, and a tail fuze which incorporates a T25E6 tail fuze drive assembly (3) and a T40 flexible coupling which couples the drive assembly to the tail fuze. The complete round weighs 710 pounds.

6. **Bomb Body (fig. 2).** The bomb body is round in cross section. It has an ogival nose and truncated conical tail. A burster tube (15) is welded to the bomb body at the nose end and into a hole in a baseplate (10) which is welded to the tail end of the bomb body. The burster tube is internally threaded at each end and is fitted with fuze wells (11 and 16). The nose end of the burster tube is closed by a nose plug (1) which is fitted with a gasket (2). A retainer ring (8), a plug bushing (6), and a closing plug (7) are used to close the tail end of the burster tube when the bomb is shipped. Three threaded suspension lug inserts (4) are welded into the bomb body. The suspension lug inserts are



- | | |
|-----------------------------|-----------------|
| 1. Nose fuze | 4. Fin assembly |
| 2. Suspension lugs | 5. Arming wire |
| 3. Tail fuze drive assembly | 6. Bomb body |

Figure 1. MC-1 750-pound nonpersistant gas bomb.

closed by shipping plugs during shipment. The rim of the baseplate is grooved to retain eight socket-head screws which hold the fin assembly to the bomb body. Two alinement pins (5), spaced 180° apart on the rim of the baseplate, fit into holes in the fin assembly. Four threaded holes (9) in the baseplate are used for bolting a shipping guard over the tail of the bomb body during shipment.

7. Filling. The MC-1 gas bomb is filled with 24 gallons (220 lb.) of GB (3, fig. 2).

8. Marking. The bomb body is painted grey. A single green band is painted around the center, nose, and tail; and the nomenclature, filling, weight, and lot number are stenciled in green on the bomb body.

9. Fin Assembly. A T152E2 (M131) fin assembly (TB 9-1980-57) is used with the MC-1 gas bomb. The fin is shipped separately and is installed on the bomb body in the field (par. 18).

10. Burster. The burster (13) is a tubular fiberboard container filled with 14½ pounds of composition B (14) and closed by metal end caps (12). It is installed in the burster tube (par. 16) when the complete round is assembled.

11. Adapter-Boosters. A T45E1 adapter-booster is used with the nose fuze, and a T46E4 adapter-booster is used with the tail fuze. See TM 9-1980 or TB 9-1980-57 for detailed information on the adapter-boosters.

12. Fuzes. The MC-1 gas bomb uses a T709E3 (M904) nose fuze and a T771E4 (M905) tail fuze. The tail fuze is armed by a T25E6 drive assembly which fits into the access hole in the fin assembly. See TM 9-1980 or TB 9-1980-57 for detailed information on the fuzes.

13. Suspension Lugs. Suspension lugs shipped with the T152E2 (M131) fin assembly (par. 9) are used with the MC-1 gas bomb. The base of each suspension lug is threaded to fit the suspension lug inserts in the bomb body. Setscrews are furnished with some suspension lugs.

14. Arming Wire Assembly. A T10 arming wire assembly is used with the MC-1 gas bomb. The T10 arming wire assembly is a type E two-branch arming wire (TM 3-400/TO 11C2-1-1) with a swivel-type loop. One branch of the arming wire is 37 inches long; the other is 40 inches long.

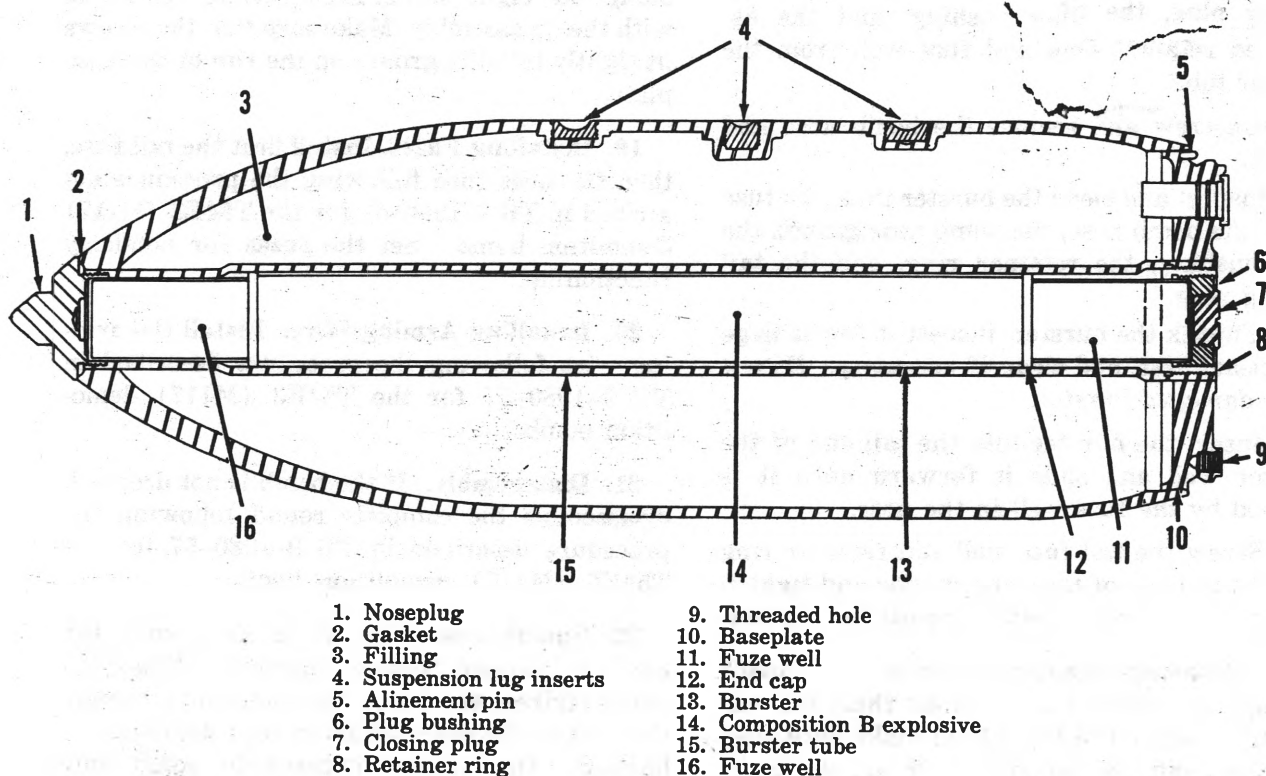


Figure 2. MC-1 gas bomb body and burster.

SECTION III

ASSEMBLY AND DISASSEMBLY OF A COMPLETE ROUND

Warning: Impermeable protective clothing (TM 3-304/TO 14P3-1-9) must be worn by personnel handling MC-1 gas bombs. Detection equipment must be used to test for leakers, and decontamination materials must be readily available.

15. Installing Suspension Lugs. a. Remove the shipping protector from the MC-1 bomb body by unscrewing the four bolts that hold it to the bomb body.

b. Remove the fin assembly, suspension lugs, and setscrews (if furnished) from the packing container.

c. If double suspension is to be used, remove the plugs from the outer suspension lug inserts. If single suspension is to be used, remove the plug from the center lug insert.

d. Screw the suspension lugs into the appropriate suspension lug inserts and fasten them in place with the setscrews (if furnished).

16. Installing Burster. a. Unscrew the tail closing plug, the lug bushing, and the assembled retainer ring and fuze well from the burster tube.

b. Unscrew and remove the bomb nose and gasket.

c. Inspect and clean the burster tube, the fuze wells, the bomb nose, the bomb nose gasket, the plug bushing, the retainer ring, and the tail closing plug.

d. Unpack the burster, inspect it for damage and cleanliness, and clean if necessary. *Do not use a damaged burster.*

e. Insert the burster into the tail end of the burster well and slide it forward until it is stopped by the fuze well in the nose.

f. Screw the tail fuze well and retainer ring into the tail end of the burster tube and tighten until the fuze well is seated against the burster.

17. Installing Adapter-Boosters. a. Unpack the adapter-boosters and inspect them for corrosion. Inspect the threads to make sure they are clean and not defective. *Do not use a defective adapter-booster.*

b. Remove the closing plugs from the fuze seat openings in the adapter boosters.

c. Screw the T45E1 adapter-booster into the nose fuze well.

d. Insert the booster cup assembly from the T46E4 adapter-booster in the tail fuze well; then screw the booster assembly from the adapter-booster into the tail fuze well.

18. Installing Fin Assembly. The fin assembly can be installed for internal or external stowage.

a. For external stowage, rotate the fin assembly so that the fins are 45° out of alignment with the suspension lugs.

b. For internal stowage, align one of the fins with the suspension lugs.

c. Place the fin assembly over the tail end of the bomb body so that the alignment pins enter the proper holes in the fin assembly for the type of stowage desired.

d. Fasten the fin assembly to the bomb body, using the eight socket-head screws furnished with the fin assembly. Make sure that the screws fit tightly into the groove on the rim of the base plate.

19. Installing Fuzes. Install first the tail fuze, then the nose fuze following the procedure described in TB 9-1980-57 for the T54E3 (M117) demolition bomb. Set the fuzes for nondelay functioning.

20. Installing Arming Wire. Install the arming wire following the procedure described in TB 9-1980-57 for the T54E3 (M117) demolition bomb.

21. Disassembly. If the bomb is not dropped, disassemble the complete round following the procedure described in TB 9-1980-57 for the T54E3 (M117) demolition bomb.

22. Functioning. The fuzes arm when the bomb is released from the aircraft. When the bomb strikes, the fuzes function and detonate the adapter-boosters which in turn detonate the burster. The burster ruptures the bomb body and disseminates the filling.

SECTION IV

PACKING, HANDLING, SHIPMENT, STORAGE, EVACUATION, AND DESTRUCTION TO PREVENT ENEMY USE

23. Packing. The MC-1 gas bomb is protected in shipment by a circular shipping guard which is bolted to the baseplate of the bomb body. The suspension lug inserts and the nose and tail fuze wells are closed with shipping plugs. No other packing is used. All other components making up a complete round are shipped separately (TB 9-1980-57).

24. Handling, Shipment, and Storage. Refer to TM 3-400/TO 11C2-1-1 and TM 3-250 for instructions in handling, shipping, and storing bombs filled with GB.

25. Evacuation and Destruction to Prevent Enemy Use. Refer to TM 3-400/TO 11C2-1-1 for instructions for evacuating or destroying gas bombs. Destruction of MC-1 gas bombs will be accomplished only by specially trained Chemical Corps personnel. Requests for assistance in the evacuation or destruction of gas bombs should be made through Chemical Corps channels to the Army, theater, or communications zone commander.

By Order of *Wilber M. Brucker*, Secretary of the Army:

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For explanation of abbreviations used, see AR 320-50.