* TB 9-2350-356-14

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

OPERATOR/MAINTENANCE INFORMATION ON CARTRIDGE, 105MM: APFSDS-T, M900

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Headquarters, Department of the Army, Washington, DC

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REPORTING OF ERRORS

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SECTION I. INTRODUCTION

1. Purpose. The purpose of this bulletin is to provide supplemental operator/maintenance level information on Cartridge, 105MM: APFSDS-T, M900. This round is designed for firing in the 105MM, M68 series gun mounted on M1 tanks only.

2. General. This bulletin contains data that will be incorporated into the following ammunition and weapon technical manuals:

a. TM 43-0001-28 - Army Ammunition Data Sheets, Artillery Ammunition for Guns, Howitzers, Mortars, Recoilless Rifles, Grenade Launchers, and Artillery Fuzes.

b. TM 9-1300-251-20 - Unit Maintenance Manual (Including Repair Parts and Special Tools List): Artillery Ammunition for Guns, Howitzers, Mortars, Recoilless Rifles, and 40MM Grenade Launchers.

c. TM 9-1300-251-34 - Direct Support and General Support Maintenance (Including Repair Parts and Special Tools List): Artillery Ammunition for Guns, Howitzers, Mortars, Recoilless Rifles, and 40MM Grenade Launchers.

* This publication supersedes TB 9-2350-356-14, dated 1 December 1991.

d. TM 9-2350-215-10-3 - Operator's Manual for Tank, Combat, Full-Tracked: 105MM Gun M60A1.

e. TM 9-2350-253-10 - Operator's Manual for Tank, Combat, Full-Tracked: 105MM Gun M60A3.

f. TM 9-2350-255-10-3 - Operator's Manual for Tank, Combat, Full-Tracked: 105MM Gun M1.

TM 9-2350-257-10-3 - Operator's Manual for Tank Combat, Full-Tracked: 105MM Gun M60A1 (RISE).

h. TM 9-2350-258-10 - Operator's Manual for Tank, Combat, Full-Tracked: 105MM Gun M48A5.

i. TM 9-2350-260-10-3 - Operator's Manual for Tank, Combat, Full-Tracked: 105MM Gun M60.

SECTION II. INFORMATION AND PROCEDURES TO BE INCORPORATED INTO OPERATOR/MAINTENANCE TECHNICAL MANUALS

3. General. The information in the following paragraphs will be incorporated as changes to the ammunition chapter of the effected manuals.

4. Description and Tabulated Data.

a. **Description.** The M900 is a U.S. designed and developed 105MM APFSDS-T cartridge (fig. 1). The complete round contains a propulsion system consisting of an M148A1B1 Steel Cartridge Case, M43 LOVA Propellant, M128 Primer, and a gun tube wear-reducing titanium-dioxide liner which is assembled to the interior wall of the cartridge case. The projectile portion of the round consists of subprojectile and a sabot. The subprojectile is made up of a monolithic depleted uranium (DU) penetrator, which is fitted with an aluminum windshield, steel tip, and an aluminum fin assemly. DU is a low level radioactive material. There is no external radiation hazard from normal handling and on-board stowage of the cartridge. The sabot is comprised of three 120 degree aluminum sections, which are assembled around the subprojectile. A steel bourrelet, containing three shear cuts, is screwed to the sabot forward face. A nylon obturator and polypropylene seal is assembled around the sabot, and a silicone rubber seal is applied over the rear face of the sabot. An M13 Tracer is assembled to the fin and is held in place by a threaded plug and disc assembly A sticker is applied to the cartridge case which indicates for M1 tank use only.

(1) Use. This is a Kinetic Energy armored-piercing antitank round intended for use with the 105MM, M68 series gun against armored targets (M1 tank only).

(2) Functioning. The M900 is loaded and fired from the M68 series, 105MM gun in the normal manner. Initiation of the electric primer ignites the propelling charge generating gases which drive the projectile from the gun and ignite the tracer. The silicone seal at the rear of the sabot prevents gas leakage between the sabot segments and the driving forces (gas) propelling the subprojectile down-bore. Upon leaving the gun, aerodynamic forces cause the sabot to separate from the subprojectile allowing the subprojectile to continue on a true course to target while the sabot segments fall quickly to earth. Target penetration is effected strictly by the high kinetic energy of the subprojectile impacting the target.

b. Tabulated Data.

Complete Round:	
Type	Fixed, APFSDS-T
Weight	40.8 lb
Length	39.5 in. (100.4 cm)
Assembly Drawing	12910111
Color	Black w/white markings
Projectile weight as fired (approx)	15.1 lb (6.86 kg)
Temperature Limits:	
Firing:	
Lower limit	-20°F (-28.9°C)
Upper limit	+120°F (+48.9°C)
Storage:	
Lower limit	-50°F (-45.6°C)
Upper limit	+145°F (+62.8°C)
Performance:	
Chamber pressure	75KSI@70°F
Velocity	1505 MPS

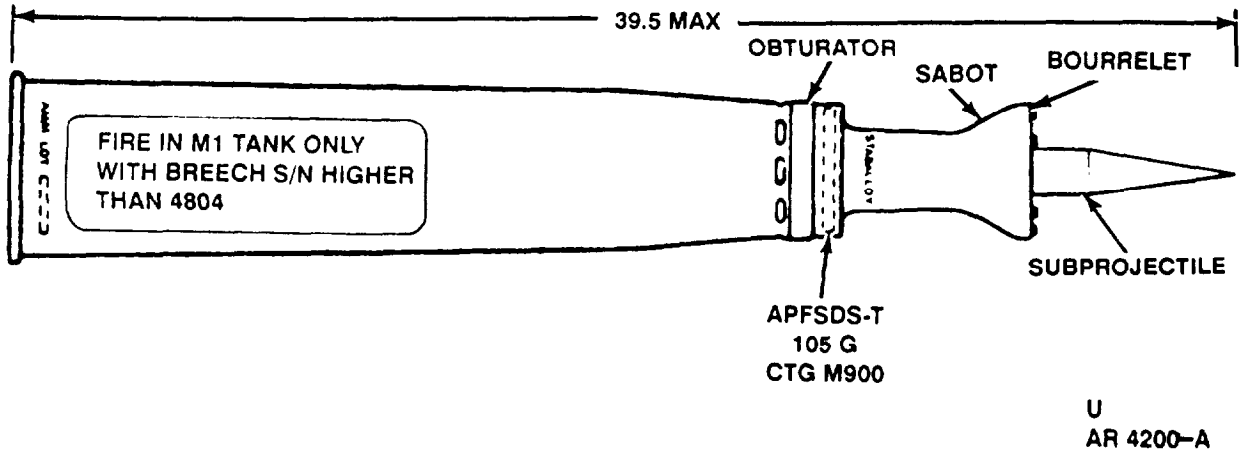

Figure 1. Cartridge, 105 Millimeter: APFSDS-T, M900.

Packaging (light Weight Container):

Inner pack drawing	N/A
Outer pack drawing	12561500
Weight (lb) (EMPTY)	17 lb
Dimensions	6.84 x 6.84 x 44-1/2 in.
Cube (ft)	1.2 cu ft
*Packing	One round per light weight metal container; 30 containers per metal pallet

Pallet w/30 Containers:

Weight (EMPTY)	1033 lb
Dimensions	44-1/2 x 42 x 39 (in.)
Cube	42.2 cu ft

*NOTE: See SC for complete packaging data including NSN's.

Shipping and Storage Data:

DOD Hazard Classification/DIV/SCG:	(04) 1.2 C
DOD Storage compatibility group	C
DOT Hazard Classification	1.2C
DOT Container Marking	CARTRIDGES FOR WEAPONS, INERT PROJECTILE AND DOT-E-9649
NSN	1315-01-324-6633
DODAC	1315-C543

c. Limitations.

(1) Projectile is not to be disposed of by burning or detonation.

(2) The M900 is a full service round which may only be fired during war emergency. All peacetime firings are prohibited except on ranges which are NRC (Nuclear Regulator Commission) approved and/or have host nation agreement. The M900 will not be fired over the heads of friendly troops, unless troops are protected by adequate cover. Troops may be struck by the discarded sabot.

NOTE: Some quantities of M900 primers are marked XM128. The "X" marking is to be disregarded. XM128 primers are the same as type classified M128 primers.