

# TM 9-2853

WAR DEPARTMENT TECHNICAL MANUAL

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## PREPARATION OF ORDNANCE MATERIEL FOR DEEP WATER FORDING

**RESTRICTED**

Dissemination of restricted matter. The information contained in restricted documents and the essential characteristics of restricted materiel may be given to any person known to be in the service of the United States and to persons of undoubted loyalty and discretion who are cooperating in Government work, but will not be communicated to the public or to the press except by authorized military public relations agencies. (See also paragraph 18b, AR 380-5, 28 September 1942.)



### NOTICE

Because of material shortages it was necessary to substitute a fabric hose for the 5/8" I.D. rubber ventilating hose in this kit. If difficulty is encountered in attaching the fabric hose to the hydrovac brake cylinder connection, (on vehicles so equipped) proceed as follows:

Pull out and cut sufficient wire from the inside of the fabric hose so that approximately 1-1/2 inches at end of hose will be without wire reinforcement. Slit end of fabric hose lengthwise with knife and hose can then be fitted over hydrovac brake cylinder connection tube. Tape hose to tube carefully, taping hose beyond connection approximately 1-1/2 inches. Paint over tape with gray insulating enamel. Joint must be waterproof. No difficulty will be experienced in fitting fabric hose to the other vent adaptors, clamps, etc., in the kit.



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*WAR DEPARTMENT*  
*5 JANUARY 1944*

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**WAR DEPARTMENT**

**Washington 25, D. C., 5 January 1944**

TM 9-2853, Preparation of Ordnance Materiel for Deep Water Fording, is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,  
*Chief of Staff.*

OFFICIAL:

J. A. ULIO,  
*Major General,*  
*The Adjutant General.*

DISTRIBUTION: C and H (1).

(For explanation of symbols, see FM 21-6)

# PREPARATION OF ORDNANCE MATERIEL FOR DEEP WATER FORDING

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FOR DEEP WATER FORDING****CHAPTER 1****INTRODUCTION**

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**1. SCOPE.**

a. This manual is published for the information and guidance of all personnel concerned with the preparation of ordnance materiel for deep water fording and the operation of materiel so prepared. It contains specific instructions for preparing combat and transport vehicles, artillery, and small arms for deep water fording in such a manner as to permit their immediate use upon landing.

**2. ARRANGEMENT.**

a. This manual consists of four chapters. Chapter I contains introductory material. Chapter II pertains to ordnance vehicles and gives the necessary instructions for preparing tanks and tank-like vehicles, transport vehicles, wheeled and half-track combat vehicles, and tractors for deep water fording. Chapter III pertains to artillery and provides instructions for waterproofing antiaircraft artillery and related fire-control equipment, and mobile field and antitank artillery. Chapter IV provides necessary instructions for waterproofing small arms.



## CHAPTER 2

### ORDNANCE VEHICLES

#### Section I

### GENERAL

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#### 3. INTRODUCTION.

a. This chapter provides instructions for the waterproofing of vehicles to be used for deep water fording. It prescribes protective measures which must be taken to prepare the vehicle so that it will operate satisfactorily and still keep its armament serviceable while traversing water of depth greater than that for which it was designed and, after landing, continue to operate satisfactorily until the waterproofing material can be conveniently removed. By means of these preparations vehicles may be operated satisfactorily for a period of 8 minutes in water of the following depths:

Transport vehicles.....	3 ft
Combat vehicles (wheeled and half-tracks).....	4½ ft
Tanks .....	6 ft
Tractors .....	5 ft

b. The succeeding paragraphs in this section contain general instructions that are applicable to all types of vehicles. Specific instructions for tanks and tank-like vehicles are given in section II. Section III provides instructions for waterproofing wheeled and half-track vehicles. Waterproofing instructions for tractors will be found in section IV.

#### 4. CLASSIFICATION OF VEHICLES.

a. Ordnance vehicles to be prepared for deep water fording fall into the following two classes:

(1) Those in which the hull must be waterproofed, and necessitates no waterproofing of the individual components. This class includes tanks and tank-like vehicles.

(2) Those in which the water surrounds the individual components of the vehicle and in which the separate units must be individually waterproofed. This class includes cars, trucks, half-tracks, and tractors.

#### 5. TYPES OF OPENINGS.

a. Openings to be sealed for deep water fording fall into the following divisions:

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FOR DEEP WATER FORDING**

(1) Normal openings for components which must be vented to operate successfully when the unit is submerged. For these openings, venting is provided by the use of auxiliary exhaust and intake pipes, stacks and adapters, and material contained in the fording kits.

(2) Normal openings which may be sealed watertight for the short time they will be immersed. Vents on gear cases, oil filler caps, and radiator filler caps are examples of this class of opening. These are generally sealed by use of tape and sealing compound.

(3) Abnormal openings that are not necessarily a serious matter under normal vehicle operation, but might adversely affect the operation of the unit during deep water fording. Missing bolts, cracks, or leaking seams in tank hulls are the most common type of this class of opening. These are the ones most commonly overlooked, and careful inspection will insure their disclosure. Large cracks and holes must be caulked with pieces of felt or rags to produce a backing for the sealing compound. Other openings and cracks are sealed with tape and sealing compound.

**6. WORKMANSHIP.**

a. All work must be thoroughly performed. One faulty seal on a vehicle component or tank hull might very easily stall the vehicle and immobilize the succeeding vehicles with disastrous results.