

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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OPERATOR'S MANUAL  
TEXTILE REPAIR SHOP, TRAILER-MOUNTED  
YORK ASTRO MODEL D8700477 ARMY MODEL SPV 35  
(FSN 3530-819-2008)  
AND  
CLOTHING REPAIR SHOP, TRAILER-MOUNTED  
YORK ASTRO MODEL D8700337 ARMY MODEL SPV 34  
(FSN 3530-819-2007)

This copy is a reprint which includes  
current pages from Changes 4 through 6.

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 DEPARTMENT OF THE ARMY  
 WASHINGTON, D. C., 18 April 1966

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	Paragraph	Page
PART ONE	TEXTILE REPAIR SHOP, TRAILER-MOUNTED	
CHAPTER 1.	INTRODUCTION	
Section I.	General .....	1-5      3
II.	Description and data .....	6-10      3-7
CHAPTER 2.	OPERATING INSTRUCTIONS	
Section I.	Service Upon Receipt of Textile Repair Shop .....	11-14      21
II.	Controls and Instruments.....	15-21      26-29
III.	Operation Under Usual Conditions .....	22-44      30-66
IV.	Operation of Materiel Used in Conjunction with Textile Repair Shop.....	45-47      66
V.	Operation Under Unusual Conditions .....	48-50      67
CHAPTER 3.	MAINTENANCE INSTRUCTIONS	
Section I.	Special Tools and Equipment.....	51, 52      69
II.	Lubrication .....	53, 54      69
III.	Preventive Maintenance Services.....	55, 56      93
IV.	Troubleshooting .....	57-138      117-123
PART TWO.	CLOTHING REPAIR SHOP, TRAILER-MOUNTED	
CHAPTER 4.	INTRODUCTION	
Section I.	General .....	139-143      125
II.	Description and Data .....	144-148      126-128
CHAPTER 5.	OPERATING INSTRUCTIONS	
Section I.	Service Upon Receipt of Clothing Repair Shop.....	149-152      133
II.	Controls and Instruments.....	153-157      138, 139
III.	Operation Under Usual Conditions .....	158-172      139-144
IV.	Operation of Materiel Used in Conjunction with Clothing Repair Shop.....	173-175      145
V.	Operation Under Unusual Conditions .....	176, 177      145
CHAPTER 6.	MAINTENANCE INSTRUCTIONS	
Section I.	Special Tools and Equipment .....	178, 179      147
II.	Lubrication .....	180, 181      147
III.	Preventive Maintenance Services.....	182, 183      158
IV.	Troubleshooting .....	184-191      162, 163
APPENDIX I.	REFERENCES .....	165
II.	BASIC ISSUE ITEM LIST .....	167
INDEX	.....	179

\*This manual supersedes those portions of TM 10-263, 18 June 1947, including C2, 22 September 1955, C3, 1 June 1959, C4, 29 December 1960, and C5, 8 August 1962, and TM 10-264, 17 October 1949, including C2, 14 May 1956, that pertain to the operator for the textile repair shop and for the clothing repair shop.

**PART ONE**

**TEXTILE REPAIR SHOP, TRAILER-MOUNTED**

**CHAPTER 1**

**INTRODUCTION**

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**Section I. GENERAL**

**1. Scope**

The instructions covered in part one of this manual are published for the use of the personnel to whom the trailer mounted textile repair shop is issued. They provide information on the operation, the lubrication, and the maintenance of the components of the textile repair shop. Also, they include descriptions of the major components and their functions in relation to other components of the textile repair shop.

**2. Appendixes**

*a.* Appendix I contains a list of publications applicable to the textile repair shop and available to the operator.

*b.* Appendix II contains the basic issue item list of the items required for the initial operation of the textile repair shop.

**3. Maintenance Forms and Records**

The maintenance forms, records, and reports which are to be used by the operator(s) in maintaining the textile repair shop are listed and described in TM 38-

750.

**4. Reporting of Equipment Manual Improvements**

The direct reporting by the individual user of errors, omissions, and recommendations for improving this equipment manual is authorized and encouraged. DA Form 2028 (Recommended changes to DA Publications) will be used for reporting these improvements. This form may be completed using pencil, pen, or typewriter and forwarded direct to the Commanding General, U.S. Army Mobility Equipment Center, ATTN: SMOME-MPD, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

**5. Orientation**

Throughout this manual the terms *right*, *left*, *front*, and *rear* indicate the directions from the viewpoint of the operator when he is standing at and facing the drawbar end of the cargo trailer. These terms also indicate the directions from the viewpoint of the operator when he is in operating position (front) of the sewing machines, of the grommet press, and of the tack-button attaching machine.

**Section II. DESCRIPTION AND DATA**

**6. General Description**

The trailer-mounted textile repair shop (fig. 1) is complete with all the equipment including auxiliary or supporting equipment necessary for the repair of textiles,

and is designed for field use where it is normally set up in tents or in temporary shelters. The textile repair shop is equipped with one clothing sewing machine, one darning machine, one overedge sewing machine, one textile sewing machine, two heavy-duty

sewing machines, one grommet press, and one tack-button attaching machine. The shop is also equipped with a fire extinguisher and a self-contained portable generator set. For a further description of the generator set refer to TM 5-6115-27112, and for a description of the cargo trailer refer to TM 9-2330-213-14.

a. *Cabinet Assembly.* The weatherproofed, rectangular-shaped aluminum cabinet assembly (1, fig. 1) is designed to store and to carry all of the equipment for the operation of the textile repair shop. It has two doors on both the left and the right sides and one door on the rear for easy access to the equipment in the cabinet. The cabinet assembly is mounted in the bed of a 1 1/2-ton cargo trailer as shown in figure 1. The holddown clamp assemblies (10, fig. 1) are used for fastening the cabinet assembly securely to the cargo trailer. The cabinet assembly is comprised of the following:

- (1) Four compartments (two on the left and two on the right) for the stowage boxes (15, fig. 1) and (3 and 12, fig. 2) which are used for storing the grommet press, tack-button attaching machine, hardware, accessories, and attachments necessary for operating the textile repair shop.
- (2) Four wooden tray assemblies (13 and 14, fig. 1) and (10 and 11, fig. 2) for stowing the clothing, darning, overedge, and textile sewing machine heads.
- (3) Six compartments with slides for the sewing machine table assemblies (11 and 12, fig. 1) and (13 and 14, fig 2).
- (4) Four lower compartments, two on either side under the table assemblies, as shown in figure 3 for the folding stands and the rope.
- (5) One compartment with slides for the two table assemblies (1, fig. 4).
- (6) Slide tracks in the bottom rear center for the two heavy-duty sewing machine tray assemblies (8, fig. 2).
- (7) Slide tracks behind the heavy-duty sewing machines for the generator set.

(8) Space in the rear on either side for the folding chairs (2 and 5, fig. 4).

(9) Space behind the folding chairs (2) for the fire extinguisher.

b. *Clothing Sewing Machine.* The clothing sewing machine (fig. 5) is a single-needle, oscillating-type shuttle, lockstitch sewing machine, designed for general-duty tailoring. It is intended for stitching clothing, coats, suits, skirts, and shirts. With each rotation of the arm shaft the oscillating shuttle rotates half a turn and back again. The oscillating shuttle allows the bobbin hook to catch the needle thread, loop it around the bobbin, and thus form a lockstitch. The clutch enables the operator to control the sewing speed.

c. *Darning Machine.* The darning machine (fig. 6) is especially designed for darning heavy fabrics to include sleeves, legs of trousers, and similar tubular articles of clothing not easily reached by a flat bed machine. With its single-needle and rotary-sewing hook it makes a lockstitch and it has no mechanism to interfere with the darning. The presser foot goes up with each stroke of the needle, therefore, the material under the needle can be moved freely in any direction while darning.

d. *Heavy-Duty Sewing Machine.* The single-needle, lockstitch, heavy-duty sewing machine (fig. 7) is designed for stitching medium and heavy canvas, duck, and light-leather materials. It has a drop feed which is made up of an alternating presser feed and a feed dog to pull the material through the machine during sewing. The vibrating presser foot and the notched lugs of the double feed dog move at the same time to pull the material through the machine as the needle moves upward. The lifting presser foot then holds the material in place while the next stitch is being made and while the feed dog and vibrating presser foot move back into position for the next stroke. The machine has a long beak, oscillating cylinder shuttle which holds the bobbin vertically beneath the throat plate. With each rotation of the arm shaft the shuttle rotates one-half turn and back again. This rotation allows the hook to catch the needle thread, loop it around the bobbin, and thus form a stitch.

e. *Overedge Sewing Machine.* The high-speed overedge sewing machine (fig. 8) is designed for simultaneous trimming and stitching raw edges of material by producing a close, tight, seam with a purl-edge finish. The stitch is formed by the sewing needle working in conjunction with the upper and the lower loopers. Thread is supplied to the machine from the cones of thread—the needle, the upper looper, and the lower looper, each being fed from a separate cone.

f. *Textile Sewing Machine.* The single-lockstitch, rotary-hook textile sewing machine (fig. 9) is a high-speed machine for stitching or sewing straight seams on medium-heavy materials such as webbing, tentage, upholstery, and flat leather. It uses a drop feed consisting of a feed dog and presser foot that move at the same time on the upstroke of the needle, and then come together to pull the material through the machine. It is equipped with a rotary hook with a mechanical opener. With every rotation of the arm shaft, the hook rotates twice and catches the needle thread loop, carrying it around the bobbin.

g. *Grommet Press.* The hand-lever operated grommet press (fig. 10) is a small machine consisting of a metal frame (3) that houses the plunger (19). It is equipped with assorted sets of removable chucks and dies as shown in figure 10. The chucks are installed in the plunger and the dies are installed in the hole (17) in the lower part of the grommet press. This machine is used to attach snap fasteners to clothing and equipment. The grommet press is designed to press the chuck down upon the die, thus molding the separate metal snap fastener parts into the finished fastener and attaching the fastener to the material.

h. *Tack-Button Attaching Machine.* The hand-lever operated tackbutton attaching machine (fig. 11) is a small machine consisting of a frame (3) that houses the plunger (15). It is equipped with two sets of removable dies. The machine is used to fasten the button to the tack on clothing or material. The machine uses an open- or a closed-top button and a tack with a small (14-line) or large (17-line) diameter head. The tack may be single- or double-pronged. A single- or double-pronged tack requires a button with a single hole; a double-pronged

tack requires a button with a double hole.

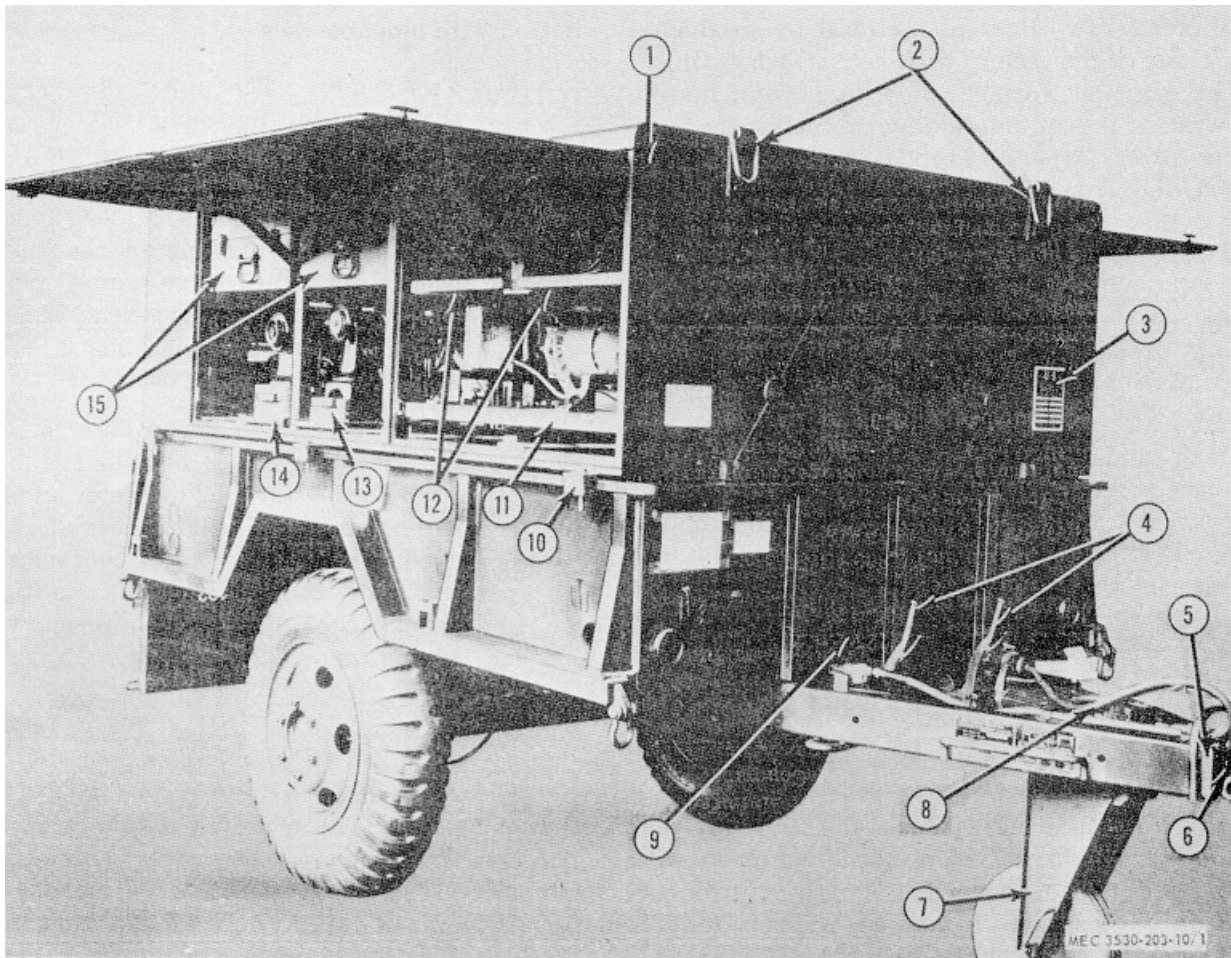
- (1) *Upper dies.* The upper die (7) for the closed-top button is flat so as to receive the flat surface of the button. The upper die (8) for the open-top button carries a stud which slips into the opening in the button head. Both dies have small wires which clamp the buttons in position while the machine is being operated.
- (2) *Lower dies.* The lower dies (6 and 9) for both types of buttons are identical except for the diameter of the die openings. The diameter of the openings in the two dies conforms in size with the diameter of the tackheads. Both dies are equipped with springs and sliding shanks.

## 7. Identification

The textile repair shop has one identification plate (fig. 12) mounted on the front of the cabinet assembly. The plate shows the manufacturer's stock, model, contract, and serial numbers; military model number; military specification number; and manufacturer's name and address.

## 8. Differences in Models

Part one of this manual covers only the York Astro Model D8700477 Trailer-Mounted Textile Repair Shop. However, the Hyde Models T2WT-51 and T2WT-51AC and the McCabe Powers Model M-4746T Trailer-Mounted Textile Repair Shops are still in use. The primary differences between the York Astro Model and the Hyde and the McCabe Powers Models are as follows: The York Astro Model has a trailer and a generator set that differ from those of the Hyde and the McCabe Powers Models. Also, the York Astro Model has a cabinet assembly, but the Hyde and the McCabe Powers Models do not.



- |   |                            |    |   |
|---|----------------------------|----|---|
| 1 | Cabinet assembly           | 9  | Trailer, cargo                            |
| 2 | Loop assemblies, lifting   | 10 | Clamp assembly, holddown                  |
| 3 | Plate, identification      | 11 | Table assembly, heavy-duty sewing machine |
| 4 | Handbrakes, right and left | 12 | Table assemblies                          |
| 5 | Coupler, drawbar           | 13 | Tray assembly, darning machine            |
| 6 | Chains, safety             | 14 | Tray assembly, clothing machine           |
| 7 | Caster                     | 15 | Box, storage                              |
| 8 | Cable, intervehicular      |    |   |

Figure 1. Trailer-mounted textile repair shop, three-quarter front view.

### 9. Components Comprising Textile -Repair Shop

The major components comprising the textile repair shop are a cargo trailer, a cabinet assembly, a clothing sewing machine, a darning machine, an overedge sewing machine, a textile sewing machine, two heavy-duty sewing machines, a grommet press, and a tack-button attaching machine. The auxiliary items or components used with the textile repair shop are the fire extinguisher and the generator set. The purpose of each

component is as follows:

Major Components	Purpose
Cargo trailer.	Transporting textile repair shop.
Cabinet assembly.	Storing equipment against weather conditions.
Clothing sewing machine.	Sewing or stitching clothing.