

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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DIRECT SUPPORT, GENERAL SUPPORT,  
AND DEPOT MAINTENANCE REPAIR PARTS  
AND SPECIAL TOOLS LIST

TELESCOPE, ELBOW M116A1D  
(1240-759-7781), M116 (1240-898-6787),  
M116C (1240-898-6789), AND  
M116F (1240-974-6432)

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HEADQUARTERS, DEPARTMENT OF THE ARMY  
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TECHNICAL MANUAL }  
 No. 9-1240-288-35P }

HEADQUARTERS,  
 DEPARTMENT OF THE ARMY  
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**DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE  
 REPAIR PARTS AND SPECIAL TOOLS LIST  
 TELESCOPE, ELBOW M116A1D (1240-759-7781),  
 M116 (1240-898-6787), M116C (1240-898-6789), AND  
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\*This manual supersedes TM 9-1240-288-35P, 29 Mar 62, including all changes.

## Section I. INTRODUCTION

### 1. Scope

This manual lists repair parts, special tools, and equipment required for the performance of direct support, general support, and depot maintenance of the Telescope, Elbow M116A1D, M116, M116E and M116F.

### 2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. *Repair Parts-Section II.* A list of repair parts for the performance of maintenance at the direct support, general support, and depot level in figure and item number sequence.

b. *Special Tools, Test and Support Equipment-Section III.* A list of special tools, test and support equipment for the performance of maintenance at the direct support, general support, and depot level.

c. *Federal Stock Number and Reference Number Index-Section IV.* A list of Federal Stock Numbers in ascending numerical sequence followed by a list of reference numbers in ascending alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

### 3. Explanation of Columns

The following provides an explanation of columns in the tabular lists in Sections II and III.

a. *Source Maintenance and Recoverability Recoverability Codes (SMR), Column 1:*

(1) Source code, indicates the selection status and source for the listed item. Source codes are:

| Code | Explanation                                                                                                                                                                                                                                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P    | Repair parts, special tools, and test equipment which are stocked in or supplied from the (GSA,/DSA, or Army supply system and authorized for use at indicated maintenance categories.                                                                         |
| P2   | Repair parts, special tools, and test equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end items dictates that a minimum quantity be available in the supply system.                         |
| P9   | Assigned to items which are NSA design controlled; unique repair parts, special tools, test, measuring and diagnostic equipment, which are stocked and supplied by the Army Comsec logistic systems, and which are not subject to the provisions of AR 380-41. |
| P10  | Assigned to items which are NSX design controlled; special tools, test measuring and diagnostic equipment for Comsec support, which are accountable under the provision of AR 380 41, which are stocked and supplied by the Army Comsec logistic system.       |
| Code | Explanation                                                                                                                                                                                                                                                    |
| M    | Repair parts, special tools and test equipment which are to be manufactured at indicated                                                                                                                                                                       |

maintenance levels.

| A    | Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.                                                                                                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X    | Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly Should result in retirement of the end item from the supply system.                                                                                                                                                                                                                                                             |
| X    | Repair parts which are not procured or stocked. The requirements for such items will be filled by use of the next higher assembly or component.                                                                                                                                                                                                                                                                                                                                                                        |
| X2   | Repair parts, Special Tools and Test Equipment which have no foreseen mortality. The indicated maintenance category requiring such repair parts will attempt to obtain same through cannibalization and/or salvage. When such items are not obtainable through cannibalization or salvage, the item may be requisitioned with accompanying justification, through normal supply channels.                                                                                                                              |
| G.   | Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to Depot supply level.                                                                                                                                                                                                                                                                                                   |
|      | (2) Maintenance code, indicates the lowest category of maintenance authorized to install the listed item. The maintenance level codes are:                                                                                                                                                                                                                                                                                                                                                                             |
| Code | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| C    | Crew or operator maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| O    | Organizational maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| F    | Direct support maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| H    | General support maintenance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| D    | Depot maintenance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|      | (3) <i>Recoverability Codes.</i> The following codes will be used when the responsible Army activity desires the return of unserviceable repair parts, special tools and test equipment:                                                                                                                                                                                                                                                                                                                               |
| Code | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| R    | Applies to repair parts (assemblies and components) special tools and test equipment which are considered economically repairable at direct and general support maintenance levels. When the item is no longer economically repairable it is normally disposed of at the GS Level. When supply considerations dictate, some of these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710-50. When so listed, they will be replaced by supply on an exchange basis. |

| Code | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S    | Repair parts, special tools, test equipment and assemblies which are economically repairable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically repairable, they will be evacuated to a depot for evaluation and analysis before final disposition.                                                                                                                           |
| T    | High dollar value recoverable repair parts, special tools and test equipment which are subject to special handling and are issued on an exchange basis. Such items will be evacuated to the depot for overhaul or final disposition. This criteria is interpreted as including items like engines even though minor adjustments/repairs are authorized at below depot level. Communications-Electronics and Missile Support Items will be repaired/overhauled only at depots. |
| U    | Repair parts, special tools and test equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value or reusable casings or castings.                                                                                                                                                                                                                                                               |
|      | b. <i>Federal Stock Number, Column 2.</i> This column indicates the Federal Stock Number assigned to the item and will be used for requisitioning purposes.                                                                                                                                                                                                                                                                                                                   |
|      | c. <i>Description, Column 3.</i> This column indicates the Federal item name and any additional description of the item required. The abbreviation "w / e" when used as a part of the nomenclature, indicates the Federal stock number includes all armament, equipment, accessories, and repair parts issued with the item. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses.           |
|      | d. <i>Unit of Measure (U/M), Column 4.</i> A 2 character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based e.g., ft, ea, pr, etc.                                                                                                                                                                                                                                                                                     |
|      | e. <i>Quantity Incorporated in Unit, Column 5.</i> This column indicates the quantity of the item used in the assembly or the portion illustrated. A "V" appearing in this column in lieu of a (quantity indicates that a definite quantity cannot be indicated, (e.g., shims, spacers, gaskets, etc.).                                                                                                                                                                       |
|      | f. <i>30-Day DS GS Maintenance Allowances, Columns 6 and 7.</i>                                                                                                                                                                                                                                                                                                                                                                                                               |

**NOTE: Allowances in GS column are for GS maintenance only.**

(1) The allowance columns are divided into three subcolumns. Indicated in each subcolumn, opposite the first appearance of each item, is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the applicable allowance columns. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for DS (CS, levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported.

(3) Determination of the total quantity of parts required for maintenance of more than 100 of these equipments can be accomplished by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths and multiplying the decimal factor by the parts quantity authorized in the 51 100 allowance column. Example: authorized allowance for 51100 equipments is 40; for 1.50 equipments multiply 40 by 1.50 or 60 parts required.

g. *1-Year Allowances Per 100 Equipments Contingency Planning Purposes, Column 8.* This column indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for one year.

h. *Depot Maintenance Allowance Per 100 Equipments, Column 9.* This column indicates opposite the first appearance of each item, the total quantity authorized for depot maintenance of 100 equipments. Subsequent appearances of the same item will have the letters "REF" in the allowance column. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

i. *Illustration, Column 10.* This column is divided as follows:

(1) *Item number column 10a.* Indicates the figure number of the illustration in which the item is shown.

(2) *Figure number column 10b.* Indicates the callout number used to reference the item in the illustration.

#### 4. Special Information

a. Action change codes indicated in the left hand margin of the listing page denote the following:

N - Indicates an added item not included in previous publications.

C - Indicates a change in data.

F - Indicates a change in FSN only.

b. The following publications pertain to Telescope, Elbow

M116A1D:

TM 9-1015-203-20P Organizational Maintenance  
Repair Parts and Special Tools  
Lists for Howitzer, Light,  
Towed, 105MM M101 and  
M101A1

M116

TM 9-2300-216-20: Organizational Maintenance  
Repair Parts, and Special Tool  
Lists for Howitzer, Heavy, Self-  
Propelled, 8-in. M110

M116C

TM 9-2300-216-20P Organizational Maintenance  
Repair Parts, and Special  
Tools List for Gun, Field  
Artillery, Self-Propelled,  
175MM M107

M116F

TM 9-1030-203-20P Organizational Maintenance  
Repair Parts and Special Tools  
List for Howitzer, Heavy,  
Towed, 8-in. M115

c. To maintain disassembly sequence in this manual, a sequence number in parentheses will be displayed immediately to the right of the callout number on the illustration.

d. Identifications of the usable on codes included in column 3 of this publication are:

|      |         |
|------|---------|
| Code | Used On |
| A    | M116A1D |
| B    | M116    |
| C    | M116C   |
| D    | M116F   |

## 5. How to Locate Repair Parts

a. When Federal Stock Number or reference number is unknown:

(1) *First*. Find the illustration covering the assembly group to which the repair part belongs.

(2) *Second*. Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(3) *Third*. Using the Repair Parts Listing, find the assembly group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When Federal Stock number or reference number is known:

(1) *First*. Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal Stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in ascending alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

## 6. Abbreviations

|               |             |
|---------------|-------------|
| Abbreviations | Explanation |
| al.....       | aluminum    |

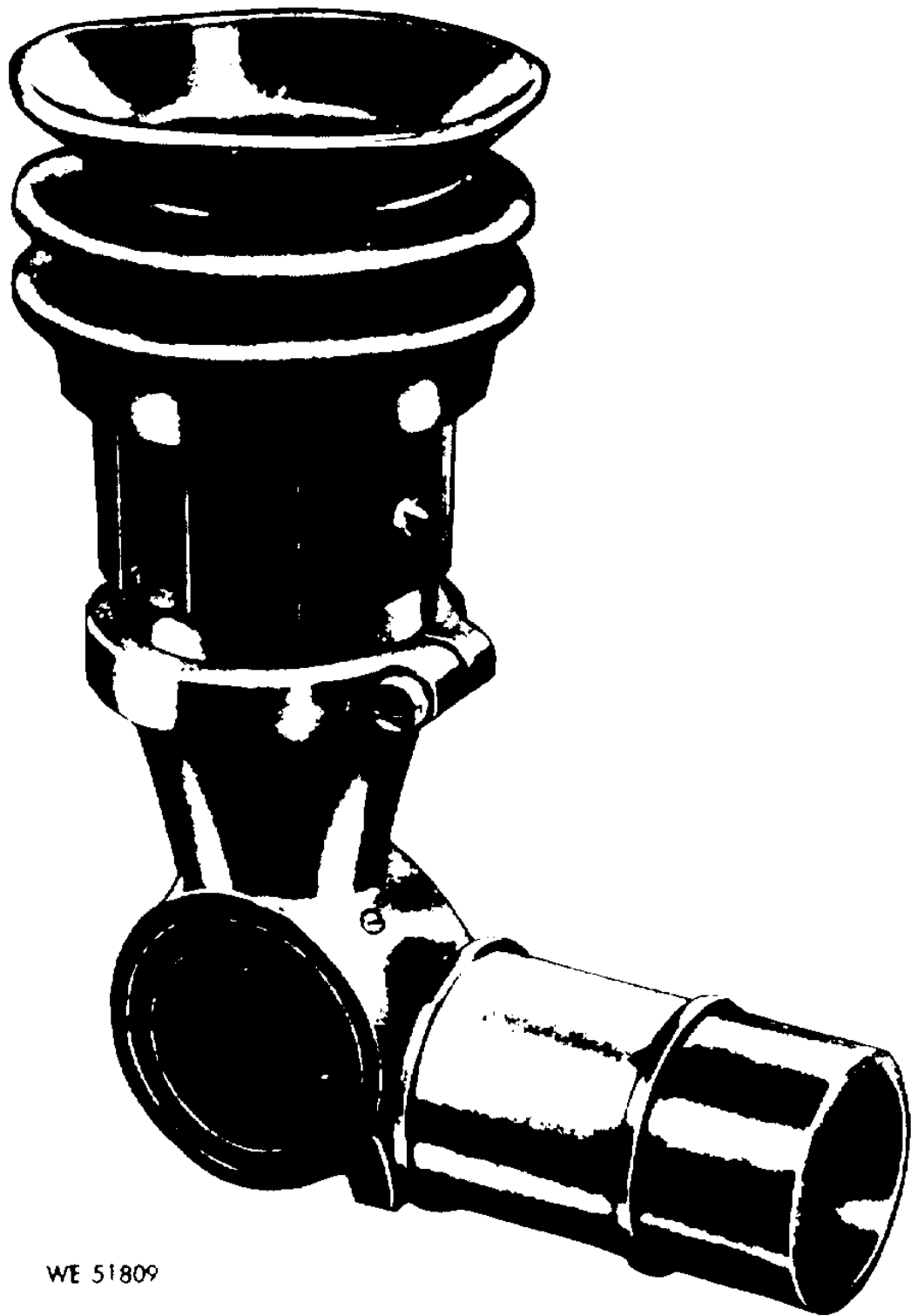
|               |                           |
|---------------|---------------------------|
| brs.....      | brass                     |
| ck.....       | cork                      |
| cres.....     | corrosion resistant steel |
| dia.....      | diameter                  |
| ext.....      | external                  |
| filh.....     | filister head             |
| fnsh.....     | finish                    |
| fp .....      | flat point                |
| gl.....       | glass                     |
| h .....       | high                      |
| hdls.....     | headless                  |
| hex soc ..... | hexagon socket            |
| hlcl.....     | helical id                |
| id.....       | inside diameter           |
| Intl.....     | internal                  |
| l .....       | long                      |
| ms.....       | Military Standard         |
| nf .....      | National fine (thread)    |
| no .....      | number                    |
| ns.....       | National special (thread) |
| oa .....      | overall                   |
| od .....      | outside diameter          |
| pnh.....      | panhead                   |
| psvt.....     | passivate                 |
| rbr .....     | rubber                    |
| rec .....     | recess                    |
| spr.....      | spring                    |
| stl.....      | steel                     |
| thd .....     | thread                    |
| thk.....      | thick                     |
| unc.....      | unified course thread     |
| unf .....     | unified fine thread       |
| uns.....      | unified special thread    |
| w.....        | wide                      |

## 7. Federal Supply Codes for Manufacturers

| Code  | Manufacturer                                                                                             |
|-------|----------------------------------------------------------------------------------------------------------|
| 00000 | Ordnance Corps                                                                                           |
| 10001 | Naval Ordnance Systems Command<br>Washington, D.C. 20360                                                 |
| 19200 | Frankford Arsenal, Philadelphia, Pa.                                                                     |
| 21450 | Ordnance Corps Engineering Standards,<br>Rock Island Arsenal, Rock Island, Il.                           |
| 96906 | Military Standard Promulgated by<br>Standardization<br>Division, Directorate of Logistic Services<br>DSA |
| 97539 | APM & Hex Seal Corp., 41 Horneck St.<br>Englewood, N.J. 07631                                            |

## 8. Recommendations for Maintenance Publication Improvements

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded directly to The Commanding Officer, Frankford Arsenal, ATTN: AMSWE-SMF-W3100, Philadelphia, Pa. 19137.



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*Figure 1. Elbow telescope M116A1D, M116, M116C, and M116F.*