DEPARTMENT OF THE ARMY TECHNICAL MANUAL **TM 5-6675-211-15P**

DEPARTMENT OF THE AIR FORCE TECHNICAL ORDER **TO 49AA1-2-14**

OPERATOR, ORGANIZATIONAL, FIELD, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS

ALIDADE, SURVEYING: TELESCOPIC; W/ACCESSORIES AND CARRYING CASE

DIETZGEN MODEL 6230, 10 TO 18 POWER
FSN 6675-190-5260

DIETZGEN MODEL 6220, 12 TO 24 POWER
FSN 6675-190-5261

This copy is a reprint which includes current pages from Changes 1 through 3

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

JULY 1961

Changes in force: C 1, C 2, and C 3

TM 5-6675-211-15P
C3

CHANGE
No. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *23 May 1973*

Operator, Organizational and Depot Maintenance
Repair Parts and Special Tool Lists

ALIDADE, SURVEYING; TELESCOPIC;
W/ACCESSORIES AND CARRYING CASE (DIETZGEN MODEL 6230)
10-TO 18-POWER; FSN 6675-190-5260
(DIETZGEN MODEL 6220) 12-TO 24-POWER;
FSN 6675-190-5261

TM 5-6675-211-15P, 26 July 1961 is changed as follows:
Page vii. Paragraph 6 is superseded as follows:

6. Reporting of Errors

You can improve this manual by calling attention to errors and by recommending improvements using DA Form 2028 (Recommended Changes to Publications) or by a letter, and mail direct to Commander, U.S. Army Troop Support Command, ATTN: AM-STS-MPP, St. Louis, MO 63120. A reply will be furnished directly to you.

Page 1. Section II is superseded as follows:

SECTION II
BASIC ISSUE ITEMS LIST AND ITEMS
TROOP INSTALLED OR AUTHORIZED

Section I. INTRODUCTION

1. Scope

This appendix lists items required by the operator for operation of the alidade.

2. General

This list is divided into the following sections:

a. Basic Issue Items List-Section II. Not applicable.

b. Items Troop Installed or Authorized List-Section III. A list of items in alphabetical sequence, which at the discretion of the unit commander may accompany the alidade. These items are NOT SUBJECT TO TURN-IN with the alidade when evacuated.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized, Section III.

a. Source, Maintenance and Recoverability Code (SMR). Not applicable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Furnished with Equipment (BIIL). Not applicable.

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR code	(2) Federal stock number	(3) Description Ref No. & mfr code	Usable on code	(4) Unit of meas	(5) Qty auth
	6675-641-3525	PIN		EA	1
	5120-236-2127	SCREWDRIVER		EA	1

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25A (qty rqr block No. 174), Organizational maintenance requirements for Surveying Equipment.

CHANGE
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *28 June 1966*

Operator, Organizational, Field, and Depot Maintenance Repair Parts and Special Tool Lists

ALIDADE, SURVEYING TELESCOPIC; W/ACCESSORIES AND CARRYING CASE DIETZ-GEN MODEL 6230, 10 TO 18 POWER FSN 6675-190-5260 DIETZGEN MODEL 6220,12 TO 24 POWER FSN 6675-190-5261

TM 5-6675-211-15P, 26 July 1961, is changed as follows:

6. Reporting of Equipment Publication Improvements. (Superseded)

DA Form 2028 will be used for reporting discrepancies and recommendations for improving this equipment publication. The form will be completed by the individual using the manual and forwarded direct to: Commanding General, U.S. Army Mobility Equipment Center, ATTN: SMOME-MPD, 4300 Goodfellow Boulevard, St. Louis, MO 63120.

All changes, additions, or deletions of Federal Stock Numbers or Manufacturer's Part Numbers within this change should be appropriately reflected in the index.

Page	Line	Action	Source codes: Technical service	Source	Maintenance	Recoverability	Federal stock No.	Description	Unit of issue	Quantity authorized	Quantity w/equipment
			a	b	c	d	e	f	g	h	i
								SECTION II—BASIC ISSUE ITEMS LIST			
								2602.2—COMMON TOOLS			
1	1	Del colm a ch colm i.	----	----	----	----	5120-236-3245.	SCREWDRIVER * * *----------	----	----	1
								2602.4—PUBLICATIONS			
	1	Del colm a ch colm h and i.	----	----	----	----	----------	DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, FIELD AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS TM 5-6675-211-15P.	----	1	1
	2	Del colm a ch colm h and i.	----	----	----	----	----------	DEPARTMENT OF THE ARMY TECHNICAL BULLETIN ENG 300.	----	1	1
	3	Del colm a ch colm h and i.	----	----	----	----	----------	DEPARTMENT OF THE ARMY TECHNICAL MANUAL 5-6300-1.	----	1	1

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)
ACSI (1)
DCSLOG (1)
CNGB (1)
TSG (1)
CofEngrs (3)
Dir of Trans (1)
CofSptS (1)
USAMB (1)
USAARTYBD (2)
USAARMBD (2)
USAIB (2)
USAADBD (2)
USAAEBWBD (2)
USAAVNBD (2)
USCONARC (3)
OS Maj Comd (5) except
USASETAF (2)
USARJ (1)
USAMOCOM (2)
UBASMC (1)
MDW (1)
Armies (2)
Corps (2)
Div (2)
Engr Bde (1)
Svc Colleges (2)
Br Svc Sch (2)
USACDCEC (10)
CC-E (1)
USMA (2)
GENDEP (10)
Engr Dep (10)
A Dep (2) except
TOAD (3)
USA Tml Comd (2)
Army Tml (1)
Div Engr (2)
Dist Engr (2)
USAERDL (3)
USAMEC (46)
Engr Cen (5)
USAREUR Engr Proc Cen (2)
USAREUR Engr Sup Con Agcy (10)
Engr Fld Maint Shops (2)
Ft Knox Fld Maint Shops (10)
Fld Comd, DASA (8)
AMS (3)
USAREURCOMZ (2)
USAC (1)
MAAG (I)
JBUSMC (1)
Units organized under following TOE's:
5-48 (2)
5-237 (5)
5-262 (5)
5-207 (2)
5-278 (5)
5-279 (2)
5-500 (EC) (2)

NG: State AG (3).
USAR: Same as Active Army except allowance is one copy to each unit.
For explanation of abbreviations used, see AR 320-50.

1GPO 862 966

Operator, Organizational, Field, and Depot Maintenance

Repair Parts and Special Tool Lists

ALIDADE, SURVEYING: TELESCOPIC; W/ACCESSORIES AND CARRYING CASE

DIETZEN MODEL 6230, 10 TO 18 POWER FSN 6675-190-5260

DIETZEN MODEL 6220, 12 TO 24 POWER FSN 6675-190-5261

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *11 March 1964*

TM 5-6675-211-15P, 26 July 1961, is changed as follows:

Page i. INTRODUCTION. So much of line 6 that reads "Comments and suggestions" is changed to read Reporting of equipment manual improvements.

Page ii. Paragraph 1. Delete subparagraph b, and substitute the following:

b. Price information for stock-type repair parts may be obtained from applicable Department of the Army type 2-series supply manuals and/or Supply Management Data and Price List (ML) of the Department of Defense Section of the Federal Supply Catalog.

Page iii. Paragraph 2. Delete subparagraph *i, Guide Quantities Per 100 Equipments*., and Authorized Stockage chart, and substitute the following:

i. 15-Day Organizational Maintenance Allowance Per 100 Equipments. Shown for each repair part is either a quantity or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each repair part authorized to be stocked by organizational maintenance. This quantity is based on past experience with similar items and the latest mortality data for 500 hours operation per year. It is the average quantity required to provide one prescribed load for 100 items of equipment for a 15-day period under average combat conditions.

(2) The quantity of repair parts authorized for stockage in accordance with the number of prescribed loads authorized by the major commander are determined by using Table 1.

(3) Table 1 is a consolidation of items quantitatively allocated in this manual. It indicates the average quantity required to provide one prescribed load for 1-5 and/or 6-10 items of equipment for a 15-day period under average combat conditions. A minimum stockage sufficient to repair one item and/or assembly is authorized (e.g., if 3 belts are required, then 3 belts are allocated as the minimum stockage). This quantity will be indicated in the minimum stockage authorization column.

Note. Combat essential items which must be stocked or on order at organizational maintenance at all times, regardless of demand, will be identified in the allowance column by a quantity in parentheses.

Table 1. Prescribed Load Listing

Federal stock No.	Description	Functional group	Minimum stockage authorization	Unit of issue	15 days organizational maintenance allowances	
					1-5	6-10
6675-378-9216	VIAL: vernier level (17866) S52385	6713			(1)	(1)
6675--392-4510	VIAL, STRIDING LEVEL "A" (17866) SI2401	6713			(1)	(1)
6675-392-4511	VIAL, LEVEL: level, alidade "B" (17866) SI2723	6713			(1)	(1)

(4) Units and organizations authorized more than one prescribed load will multiply the quantity listed in the appropriate end item density spread column of 1-5 or 6-10 by the number of prescribed loads.

(5) When more than 10 equipments require support, multiply the quantity listed in the 6-10 column by the number of equipments and the number of authorized prescribed loads, divide by 10, and round to the nearest whole number.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 1, the following formula would be used:

$$4 \times 17 \times 1 \div 10 = 6.8$$

The resulting fraction is 0.8; therefore, the authorized stockage is 7.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 3, the following formula would be used:

$$4 \times 17 \times 3 \div 10 = 20.4$$

The resulting fraction is 0.4; therefore, the authorized stockage is 20.

Note. An exception is made for those units and organizations required to have on hand, boxed or packaged prescribed load(s) pursuant to a special mission assignment. Such prescribed load(s) will be computed or selected separately from quantities authorized for stockage at permanent station.

(6) Repair parts required to perform organizational maintenance, which are not authorized for stockage are identified by an asterisk, and are to be requisitioned for immediate use only.

(7) Subsequent changes to allowances will be limited as follows:

(a) No decrease in the stated quantity of Combat Essential Items is authorized.

(b) No change in the range of items is authorized. If exception to the Prescribed Load Listing or revision to allowances is considered necessary, a recommendation should be forwarded to the U.S. Army Mobility Support Center (par. 6).

(c) Decreases in the stated quantity of items other than Combat Essential Items are authorized to a minimum quantity sufficient to repair one item and/or assembly and increases in the stated quantity are authorized for all items when justified by demand and usage experience. Detailed procedures for performing these adjustments are prescribed in AR 735-35.

Page vi. Delete subparagraph *j. Organizational Maintenance 15-Day Level, 2d Echelon.,* and substitute the following:

j. Guide Quantities Per 100 Equipments. Shown for each repair part applicable to 3d, 4th, and/or 5th echelon maintenance is either an allowance factor or an asterisk allocation which indicates the following:

(1) A guide quantity factor is shown for each part authorized to be stocked by field maintenance and supply support activities (3d and 4th echelons), and the number of repair parts recommended for depot maintenance (5th echelon). This factor is based on the latest mortality data for 500 hours operation per year and is the average quantity required by the various maintenance

echelons to provide maintenance and supply support for 100 items of equipment for a 15-day period under average combat conditions.

(2) The quantities of repair parts authorized for stockage are determined using the following mathematical formula:

Quantity of equipment to be supported, multiplied by the listed allowance factor, divided by 100.

Fractions derived from the use of the above formula will be rounded to whole numbers as follows: If the result is 1 or more and includes a fraction that is 0.5 or more, the quantity is rounded to the next higher number.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 5, the following formula would be used:

30 x 5 ÷ 100 = 1.5

The resulting fraction is 1.5; therefore, the stockage is 2.

If the result is 1 or more and includes a fraction of less than 0.5, the quantity is rounded to the next lower number. When the computed result is less than 0.5, no quantity is authorized for field and depot maintenance. However, if the item is combat essential, a quantity of 1 is authorized.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 28, the following formula would be used:

30 x 28 ÷ 100 =8.4

The resulting fraction is less than 0.5; therefore, the stockage is 8.

(3) In the guide quantity columns for field maintenance, additional repair parts authorized for use but not for initial stockage, are listed without a guide quantity factor. These items are identified by an asterisk and may be added to or deleted from stock when recorded demand experience justifies a change in stockage objective.

(4) Parts that may be required for depot maintenance, in addition to those allocated, are identified by an asterisk. These parts are to be requisitioned, when required, if not obtainable from reclamation, fabrication, or local procurement.

(5) Combat essential items of a critical nature which must be stocked at field maintenance at all times, regardless of demand will be identified in the allowance column by inclosing the allowance factor in parentheses.

Subparagraph *k* (1) So much of line 8 that reads "for Engineer equipment" is changed to read for Mobility Command equipment

Page vii. (2) So much of line 8 that reads "Engineer equipment for" is changed to read Mobility Command equipment for

(3) So much of line 3 that reads "organic Engineer equipment." is changed to read organic Mobility Command equipment. So much of line 7 that reads "for organic Engineer" is changed to read organic Command

(4) So much of line 2 that reads "for Engineer equipment" is changed to read for Mobility Command equipment. So much of line 6 that reads "Engineer equipment of" is changed to read Mobility Command equipment of

Page vii. Delete paragraph 6 and substitute the following:

6. Reporting of Equipment Manual Improvements

The direct reporting, by the individual user, of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended changes to Technical Manual Parts Lists or Supply Manual 7, 8, or 9) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to the Commanding Officer, U. S. Army Mobility Support Center, ATTN: SMOMS-MM, P. O. Box 119, Columbus, Ohio 43216. One information copy will be provided to the individual's immediate supervisor (e.g., officer, noncommissioned officer, supervisor, etc.).

Page 20. MAINTENANCE ALLOCATION CHART.
6713-Levels (All Types)
After line 3, add the following:

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
	VIAL, STRIDING LEVEL						
	Adjust	X					
	Replace	----	X				
	Repair.....	----	----	X			

Page 21. After line 5, add the following:

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
	Replace	----	X				

All changes, additions, or deletions of Federal stock numbers or Manufacturer's Part Numbers within these changes should be appropriately reflected in the index.

Page	Line	Action	Source codes				Federal stock No.	Description / Unit of issue	Expendability	Quantity incorporated in unit	15 days organizational maintenance allowance per 100 equipments	Guide quantities per 100 equipments			Illustrations	
			Technical service	Source	Maintenance	Recoverability						Field maintenance 15-day level		Depot maintenance 5th ech		
											2d ech	3d ech	4th ech	5th ech	Fig. No.	Item No.
			a	b	c	d	e	f g	h	i	j	k	l	m	n	o
11								6713—LEVELS								
	1	Ch cols c and k, add col j.			O		6675–392–4510	VIAL * * * (17866) SI2401			(1)	(1)				
	22	Ch cols c and k, add col j.			O		6675–392–4511	VIAL * * * (17866) SI2723			(1)	(1)				
	39	Ch cols b, c and k, add col j.		P1	O		6675–378–9216	VIAL * * * (17866) SI2385			(1)	(1)				

By Order of the Secretary of the Army:

EARLE G. WHEELER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)
ACSI (1)
DCSLOG (1)
CNGB (1)
TSG (1)
CofEngrs (3)
CSigO (1)
CofT (1)
CofSptS (1)
Army Maint Bd (1)
USAARTYBD (2)
USAARMBD (2)
USAIB (2)
USAADBD (2)
USAAESWBD (2)
USAAVNBD (2)
USCONARC (3)
OS Maj Comd (5) except
USASETAF (2)
USARJ (10)
USAMOCOM (2)
USASMCOM (1)
MDW (1)
Armies (2)
Corps (2)
Div,(2)
Engr Bde (1)
Svc Colleges (2)
Br Svc Sch (2) except
USAES (20)
USMA (2)
GENDEP (OS) (10)
Engr Dep (OS) (10)
Army Dep (2)
USA Trans Tml Comd (2)
Army Tml (1)
USAOSA (2)
Div Engr (2)
Engr Dist (2)
USAERDL (3)
USA Mbl Spt Cen (36)
ENGR Cen (5)
ESCO (10)
Fld Comd, DASA (8)
AMS (3)
Engr Fld Maint Shops (2)
USAREUR Engr Proc
Cen (2)
USAREUR Engr Sup
Con Agcy (10)
Chicago Proc Ofc (10)
USAREURCOMZ (2)
USA Corps (1)
MAAG (1)
JBUSMC (1)
Units org under fol TOE
(2 cys ea UNOINDC):
5-5
5-6
5-15
5-16
5-25
5-26
5-35
5-36
5-38
5-45
5-46
5-48
5-52
5-55
5-56
5-112
5-115
5-116
5-117
5-129
5-145
5-146
5-155
5-156
5-167
5-225
5-226
5-237 (5)
5-262 (5)
5-267 (1)
5-278 (5)
5-279
5-301
5-327
5-348
5-420
5-425
5-426
5-500 (Tms EC, GD, HD, HF, HG, IA)
5-600
5-625
5-626
7-25
7-26
29-52
29-56
29-57
39-51
39-61
55-225
55-227

NG: State AG (3).
USAR: Same as Active Army except allowance is one (1) copy to each unit.
For explanation of abbreviations used see AR 320-50.

TECHNICAL MANUAL
No. 5-6675-211-15P
TECHNICAL ORDER
No. 49AA1-2-14

DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
WASHINGTON 25, D.C., *26 July 1961*

Operator, Organizational, Field, and Depot Maintenance Repair Parts and Special Tool Lists ALIDADE, SURVEYING: TELESCOPIC; W/ACCESSORIES AND CARRYING CASE DIETZGEN MODEL 6230, 10 TO 18 POWER FSN 6675-190-5260 DIETZGEN MODEL 6220, 12 TO 24 POWER FSN 6675-190-5261

*This manual supersedes DA Supply Manual ENG 7, 8 & 9-6300-1/TO 49AA1-1-4, 16 September 1955, including C 1, 5 May 1960.

SECTION I
INTRODUCTION

1. General

a. This manual lists the basic issue items, repair parts and special tools for organizational, field, and depot maintenance. It indicates the allowance factors and repair parts required to be stocked by organizational maintenance (2d echelon), as their prescribed load. It indicates the guide quantity factors to be used for initial repair parts stockage by field maintenance (3d and 4th echelons), and recommends quantities of repair parts for depot maintenance (5th echelon). Information and data contained herein serve as requisitioning reference material, and as a guide to determine stockage quantities of repair parts.

b. Price information for stock-type repair parts may be obtained from applicable type 2-series supply manuals.

c. Repair parts lists are arranged as follows:

(1) Individual parts and major assemblies are listed alphabetically by item name within the functional groups.

(2) Assembly components and subassemblies are indented and listed alphabetically by item name under major assemblies.

(3) Standard hardware, bulk material, and parts peculiar with more than one application are listed in functional groups 9500.1, 9500.2, and 9901 respectively.

d. Allowances are based on 500 hours operation per year.

e. Parts applicable to specific engines and/or end items are symbolized by alphabetical letter to the right side of the description column. The symbols apply as follows:

(1) A-applies to Alidade, Dietzgen Model 6220.

(2) B-applies to Alidade, Dietzgen Model 6230.

Parts not symbolized are applicable to all end items covered in this manual.

2. Explanation of Repair Parts, Tool Lists and Basic Issue Items List

a. Source Codes.

(1) Technical service. This column lists the basic number of the technical service assigned supply responsibility for the part. A blank space denotes Corps of Engineers supply responsibility. General Engineer supply parts are identified by the letters GE in parentheses, following the nomenclature in the description column. Other technical service basic numbers are

10-Quartermaster Corps
12-Adjutant General's Corps

(2) *Source*. The selection status and source of supply for each part is indicated by one of the following code symbols:

(a) P-applied to repair parts which are high mortality parts, procured by technical services, stocked in and supplied from the technical service depot system, and authorized for use at indicated maintenance echelons.

(b) P1-applied to repair parts which are low mortality parts, procured by technical services, stocked only in and supplied from technical service key depots, and authorized for installation at indicated maintenance echelons.

(c) M-applied to repair parts which are not procured or stocked but are to be manufactured by using units at indicated maintenance echelons.

(d) A-applied to assemblies which are not procured or stocked as such but made up of two or more units, each of which carry individual stock numbers and descriptions and arc procured and stocked and can be assembled by units at indicated maintenance echelons.

(e) X-applied to parts and assemblies which are not procured or stocked, the mortality of which is normally below that of the applicable end item, and the failure of which should result in retirement of the end item from service.

(f) X1-applied to repair parts which are not procured or stocked, the requirement for which will be supplied by use of next higher component or assembly.

(g) X2-applied to repair parts which are

not stocked. The indicated maintenance echelon requiring such repair parts will attempt to obtain from salvage; if not obtainable from salvage, such repair parts will be requisitioned with supporting justification through normal supply channels.

(h) C-applied to repair parts authorized for local procurement. If not obtainable from local procurement, such repair parts will be requisitioned through normal supply channels with a supporting statement of nonavailability from local procurement.

(i) Z-applied to obsolete repair parts no longer stocked or procured.

(3) *Maintenance.*

(a) The lowest maintenance echelon authorized to install or manufacture the part is indicated by one of the following code symbols:

O-Organizational Maintenance (1st and 2d echelons)
F-Field Maintenance (3d Echelon)
H-Field Maintenance (4th Echelon)
D-Depot Maintenance (5th Echelon)

(b) This column is blank if components of kits or sets are listed that are not applicable to the item of equipment, or when an item is source coded X1.

(4) *Recoverability.* Repair parts that are recoverable are indicated by one of the following code symbols:

(a) R-applied to repair parts and assemblies which are economically repairable and, when available, are furnished by supply on an exchange basis.

(b) S-applied to repair parts which may be placed in "ready for issue" condition by cleaning, replating, anodizing, adjusting, welding, and similar operations.

b. *Federal Stock Numbers*. The Federal stock number shown in this column will be used for requisitioning purposes.

c. *Description.*

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufacturers and/or other technical services is shown in parentheses followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.
Example: (08645) 86453.

(3) Repair part quantities included in kits, sets, and assemblies, that differ from the actual quantity used on this specific end item, are listed in parentheses.

(4) When repair parts are source coded C, the manufacturer's part number will be used for local procurement.

d. *Unit of Issue*. If no abbreviation is shown in this column, the unit of issue is "each".

e. *Expendability*. Nonexpendable items are indicated by the letters NX. Items not indicated by NX are expendable.

f. *Quantity Incorporated in Unit.* The actual number of parts used in the application indicated is shown in this column. A zero (0) is shown when components of kits or sets are listed that are not applicable to this specific end item.

g. *Quantity Authorized*. This column lists the quantities of basic issue items authorized for issue to the equipment operator or crew.

h. *Quantity Issued With Equipment*. This column lists the quantity of basic issue items that are initially issued with each item of equipment. Items indicated with an asterisk (*) are to be requisitioned through normal supply channels.

i. *Guide Quantity Per 100 Equipments*. Shown for each repair part applicable to 2d, 3d, 4th, and/or 5th echelon maintenance is either an allocation factor or an asterisk ( ) allowance which indicates the following:

(1) An allowance factor is shown for each repair part authorized for stockage for the purpose of computing the quantity of repair parts to be stocked as the prescribed load (2d echelon). A guide quantity factor is shown for each part authorized to be stocked by field maintenance and supply support activities (3d and 4th echelons), and the number of repair parts recommended for depot maintenance (5th echelon). This factor is based on the latest mortality data for 500 hours operation per year and is the average quantity required by the various maintenance echelons to provide maintenance and supply

support for 100 items of equipment for a 15-day period under average combat conditions.

(2) The quantity of repair parts authorized for stockage is determined using the following chart. Explanation for the use of this chart is as follows:

(a) *Number of prescribed loads.* Indicated in this column is the number of prescribed loads each 2d echelon unit commander can authorize.

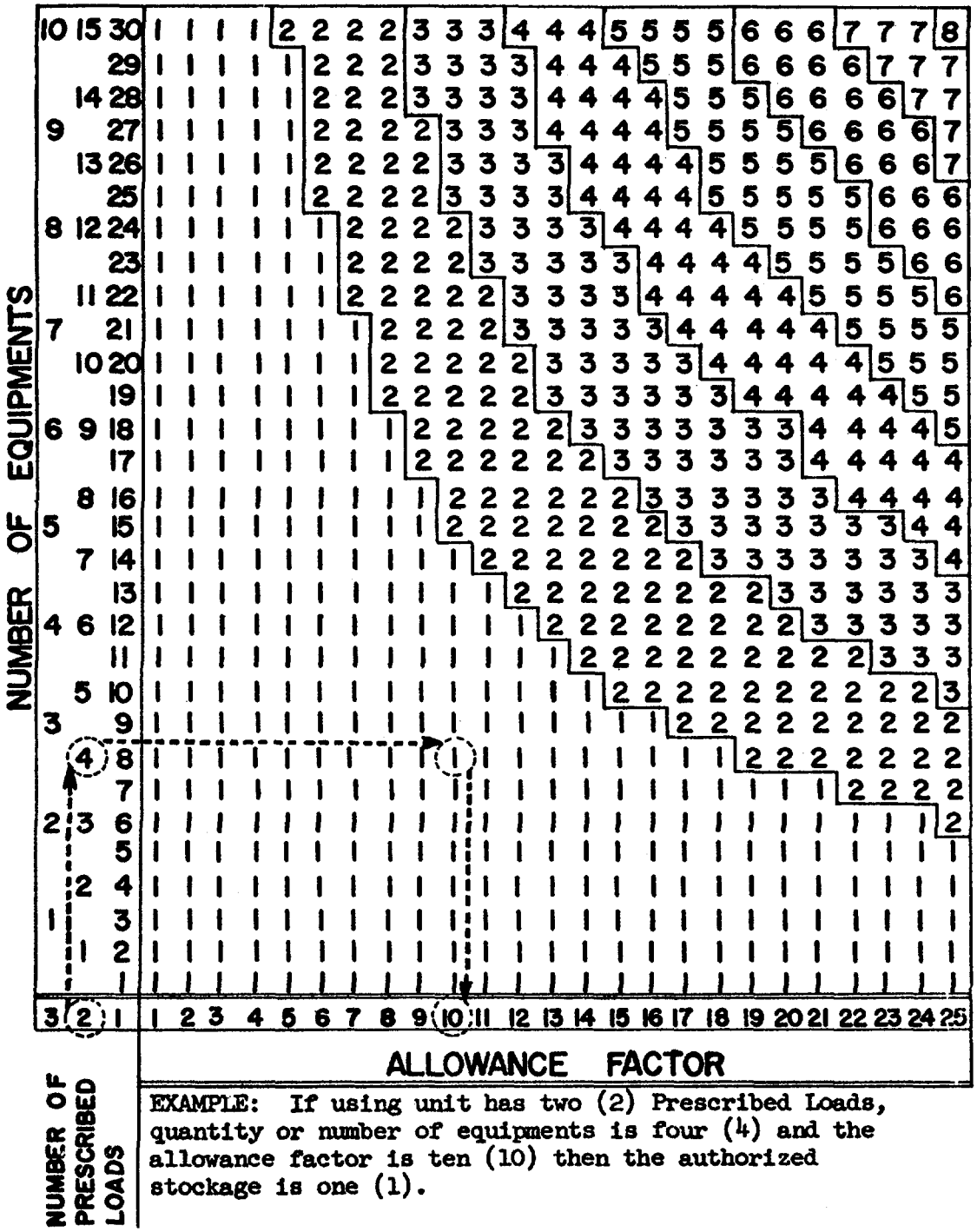
(b) *Number of equipments*. Indicated in this column is the number of equipments each 2d echelon unit commander can be authorized. The appropriate formula in (3) or j below will be used when the number of equipments being supported is higher 'than 10 for 3 prescribed loads, 15 for 2 prescribed loads, or 30 for 1 prescribed load.

(c) *Allowance factor.* Indicated in this column is the number of parts allowances up to, and including 25, that may be shown in the *15-Day Organizational Maintenance Allowances Per 100 Equipments column of this manual.*

The formulas in (3) and j below will be used for allowance factors above 25.

(d) *Authorized stockage*. Indicated in these columns are the numbers of parts that can be stocked by each 2d echelon unit commander. The method for determining the number of parts to be stocked is as follows: Read from left to right from the applicable *number of equipments* and from the bottom to top from the applicable *allowance factor*. The number of parts that must be on hand or on order at all times is indicated where the two readings intersect.

AUTHORIZED STOCKAGE



EXAMPLE: If using unit has two (2) Prescribed Loads, quantity or number of equipments is four (4) and the allowance factor is ten (10) then the authorized stockage is one (1).

(3) If the quantity of repair parts authorized for stockage or the number of equipment per prescribed load is larger than that shown in the chart, the following mathematical formula will be used:

Quantity of equipment to be supported multiplied by the listed allocation factor, divided by 100.

Fractions derived from the use of the above formula will be rounded to whole numbers as follows:

(a) If the result is 1 or more and includes a fraction that is .5 or more, the quantity is rounded to the next higher number.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 5, the following formula would be used:

30 x 5 ÷ 100 = 1.5

The resulting fraction is 1.5, therefore, the stockage is 2.

(b) If the result is 1 or more and includes a fraction of less than .5, the quantity is rounded to the next, lower number. When the computed result is less than 1, organizational maintenance is authorized a minimum stockage of 1. When the computed result is less than .5, no quantity is authorized for field and depot maintenance.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 28, the following formula would be used:

30 x 28 ÷ 100 = 8.4

The resulting fraction is less than .5; therefore, the stockage is 8.

(4) Repair parts required to perform organizational maintenance, which are not authorized for stockage, are identified by an asterisk and are to be requisitioned for immediate use only.

(5) In the guide quantity columns for field maintenance, additional repair parts which may be required to perform maintenance, but not authorized for stockage, are listed without a guide quantity factor. These items are identified by an asterisk and are to be requisitioned for immediate use only.

(6) Parts that may be required for depot maintenance, in addition to those allocated are identified by an asterisk These parts are, to be requisitioned, when required, if not obtainable from reclamation, fabrication, or local procurement.

j. *Organizational Maintenance 15-Day Level, 2d Echelon.* The quantity determined using the procedure described above is one prescribed load for a 15-day period. This formula will not be used when the authorized stockage is insufficient to repair one end item and/or assembly. A minimum stockage sufficient to repair one end item and/or assembly is authorized. These repair parts are identified by the following note in the description column (minimum stockage of _____ is authorized). The quantities contained in the prescribed load must be on hand or on order at all times. Major commanders will determine the number of prescribed loads that 2d echelon units will carry. When major commanders authorize more than one prescribed load, use the following formula, instead of the one shown above or when it is not covered in the chart above. Multiply the number of equipments by the number of prescribed loads authorized, times the allowance factor, then divide by 100.

Example:

No. of Equipments		No. of Prescribed Loads		Allowance Factor			No. of Parts Authorized for Stockage
30	x	3	x	5	÷	100	= 4.5 =5

k. *Field Maintenance 15-Day Level, 3d and 4th Echelons.*

(1) *Third echelon*. This column lists the initial guide quantity allowance factors of repair parts authorized for initial stockage by Engineer field maintenance shops (non-TOE), Engineer field maintenance companies, direct support (TOE 5-157), and similar TOE units to provide 3d echelon maintenance for Engineer equipment and to provide organizational maintenance repair parts for supported units for a 15-day period. Additional repair parts are allocated by an asterisk for immediate use only. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of stockage objectives will be performed in the time cycle prescribed by major commanders. Repair parts allocated for immediate use only may be stocked when demand

experience indicates a stockage of at least one.

(2) *Fourth echelon*. This column lists initial guide quantity allocation factors of repair parts authorized for initial stockage by Engineer field maintenance shops (non-TOE), Engineer heavy maintenance companies (TOE 5-278), and similar TOE units to provide 4th echelon maintenance for Engineer equipment for a 15-day period. Additional repair parts are allocated by an asterisk for immediate use only. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of the stockage objectives will be performed in the time cycle prescribed by major commanders. Repair parts allocated for immediate use only may be stocked when demand experience indicates a stockage objective of at least one.

(3) *Units with TOE capability of performing partial or complete field maintenance for organic Engineer equipment.* Units organized under TOE's 5-115, 5-117, 5-129, 5328, and similar TOE's with the TOE capability of performing partial or complete field maintenance for organic Engineer equipment will be authorized to stock 3d and/or 4th echelon repair parts only when specific agreements are made between the commander of the designated Engineer parts supply activity, normally direct support units (DSU) and using unit. Parts so furnished are in addition to the prescribed load and will be adjusted as demands indicate.

(4) Units with TOE Mission to provide maintenance for Engineer equipment of supported units. Units organized under TOE's such as 5-214 and 5-500 with the assigned mission to provide field maintenance for Engineer equipment of supported units are authorized to stock 3d and 4th echelon repair parts. These repair parts will be issued from the appropriate parts supply activity (parts depot and/or DSU). Such stockage is in addition to the prescribed load and will be adjusted as demands indicate.

l. *Depot maintenance, 5th echelon*. This column lists the quantity of repair parts recommended for stockage by Engineer depot maintenance shops (non-TOE) to provide depot maintenance for 100 equipments. Additional repair parts are allocated by an asterisk, for immediate use only. Explanation of the asterisk allowance is contained in E above.

m. *Illustrations.*

(1) *Figure number*. Indicates the number of the illustration in which the part is shown.

(2) *Item number*. Indicates the reference number used to point out the part in the illustration.

3. Federal Stock Numbers and Manufacturers' Part Numbers

Listed alpha-numerically in the back of this manual are the requisitioning numbers shown in the Federal Stock Number and/or description column. The alphabetical O is listed as a numerical 0 (zero).

Example of index sequence:

A	BX5-27	38.50
AAA	T295	3830-141-4957
A1/2X3	0124	3848 212
A1-950	1-77	s89/100.2
A1A22	2530-048-7342	389/100-18
B	2815-097-5429	8895-128-7642

4. Abbreviations

assy ..... assembly(ies)
lg ..... length(long)
mtg ..... mounting(s)
thd ..... thread(s)(ed)
w ..... with

5. Federal Supply Code for Manufacturers

17866 ..... Dietzgen, Eugene Co.

6. Comments and Suggestions

Report all deficiencies as specified in AR 700-38. Submit recommendations for changes, additions, or deletions to repair parts allocation and allowance factors, and other data. Additional data on climatic and terrain conditions of operation, operational age of the equipment, and the hours operated in the period covered by item 7 of DA Form 2028 is desired. Submit to the Commanding General, U.S. Army Engineer Maintenance Center, Corps of Engineers, ATTN: EMCDM, P. O. Box 119, Columbus 16, Ohio. Direct communication is authorized.

SECTION II. BASIC ISSUE ITEMS LIST

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY AUTHORIZED	QUANTITY ISSUED WITH EQUIPMENT	ILLUSTRATION	
TECHNICAL SERVICE	SOURCE	MAINTE-NANCE	RECOVER-ABILITY							FIG.	ITEM
					GROUP 26 - ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS 2602.1 - ACCESSORIES						
	P1	0		6675-392-4511	VIAL, LEVEL "B" (17866) SI2723			1	1	2	6
	P1	0		6675-392-4510	VIAL, STRIDING LEVEL "A" (17866) SI2401			1	1	1	4
	P1	0		6675-378-9216	VIAL, VERNIER LEVEL (17866) SI2385			1	1	2	7
					2602.2 - COMMON TOOLS						
10	P	0		5120-236-3245	SCREWDRIVER: flat tip, wood handle, flared tip, 1/4 in. wide, 2 in. lg blade (17866) GP1050			1	*	2	3
					2602.3 - SPECIAL TOOLS						
	P1	0		6675-641-3525	PIN: adjusting surveying instrument, steel, 0.067 in. dia, 2 1/2 in. lg (GE) (17866) SI279			2	2	2	8
					2602.4 - PUBLICATIONS						
12					DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL, FIELD, AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS TM 5-6675-211-15P			2	2		
12					DEPARTMENT OF THE ARMY TECHNICAL BULLETIN ENG 300			2	2		
12					DEPARTMENT OF THE ARMY TECHNICAL MANUAL 5-6300-1			2	2		

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY							FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
									2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					SECTION III. REPAIR PARTS LIST GROUP 22 - MISCELLANEOUS BODY, CHASSIS OR HULL AND ACCESSORY ITEMS 2210 - DATA PLATES AND INSTRUCTION HOLDERS									
	X2	O			NAIL, ESCUTCHEON "A" (17866) GP822			2	*	*	*	*		
	X2	O			PLATE, IDENTIFICATION "A" (17866) L552			1	*	*	*	*		
	X2	O			PLATE, IDENTIFICATION (17866) SI12426			1	*	*	*	*	7	11
	X2	O			RIVET, TUBULAR (17866) SI2427			3	*	*	*	*		
					GROUP 26 - ACCESSORIES. PUBLICATIONS, TEST EQUIPMENT AND TOOLS 2602.1 - ACCESSORIES									
	X2	O			CAP: objective lens "A" (17866) SI2366			1	*	*	*	*	1	5
	X2	O			CAP: objective lens "B" (17866) SI2721			1	*	*	*	*	2	2
	X2	O			CAP ASSEMBLY, PRISMATIC EYEPIECE "A" (17866) SIA633			1	*	*	*	*	1	3
	X2	O		6675-427-3489	SHADE, OBJECTIVE LENS "A" (17866) SI2367			1	*	*	*	*	1	6
	X2	O			STRAP ASSEMBLY: alidade box "A" (17866) SIA643			1	*	*	*	*	1	2
	X2	O			SUNSHADE: objective lens telescope "B" (17866) SI2722			1	*	*	*	*	2	5
					GROUP 67 - PRECISION AND TOPOGRAPHICAL INSTRUMENTS 6701 - ALIDADE									
	X2	D			ARC, VERNIER (17866) SI2376			1				*	3	6
	X2	F			ARC SET: alidade (17866) SIA638			1		*	*	*		
	X1				ARC (17866) SI2379			1					8	8
	X1				SEGMENT, SILVER (17866) SI2364			1						
	X1				VERNIER ASSEMBLY (17866) SI-A639			1					8	7
	X1				SEGMENT, SILVER (17866) SI2394			1						
	X1				VERNIER (17866) SI2377			1						
	X2	F			ARM, GRADIENTER (77866) SI2709			1		*	*	*	5	4
	X2	F		6675-427-3515	BLADE, ALIDADE "B" (17866) SI2700			1		*	*	*	7	12
	X2	F		6675-631-3388	BLADE, ALIDADE "A" (17866) SI2300			1		*	*	*	6	11
	X2	O			BUMPER, RUBBER: telescope "A" (17866) SI2305			1	*	*	*	*	3	3
	X2	D			COLUMN, PEDESTAL "A" (17866) SI2302			1				*	6	10
	X2	F			CORD: braided, 15 ft lg "A" (17866) GP974			1		*	*	*	6	8
	X2	F		6675-427-3604	GRADIENTER ASSEMBLY, ALIDADE (17866) SIA651			1		*	*	*	5	6
	X2	D			DRUM: gradienter (17866) SI2706			1				*		
	X2	D			HOUSING: gradienter screw (17866) SI2704			1				*		
	X1				KNOB, SCREW: gradienter (17866) SI2374			1						
	X2	D			NUT: gradienter (17866) SI2708			1				*		
	X2	D			SCREW: gradienter (17866) SI2705			1				*		
	X2	D			WASHER: gradienter (17866) SI2707			1				*		

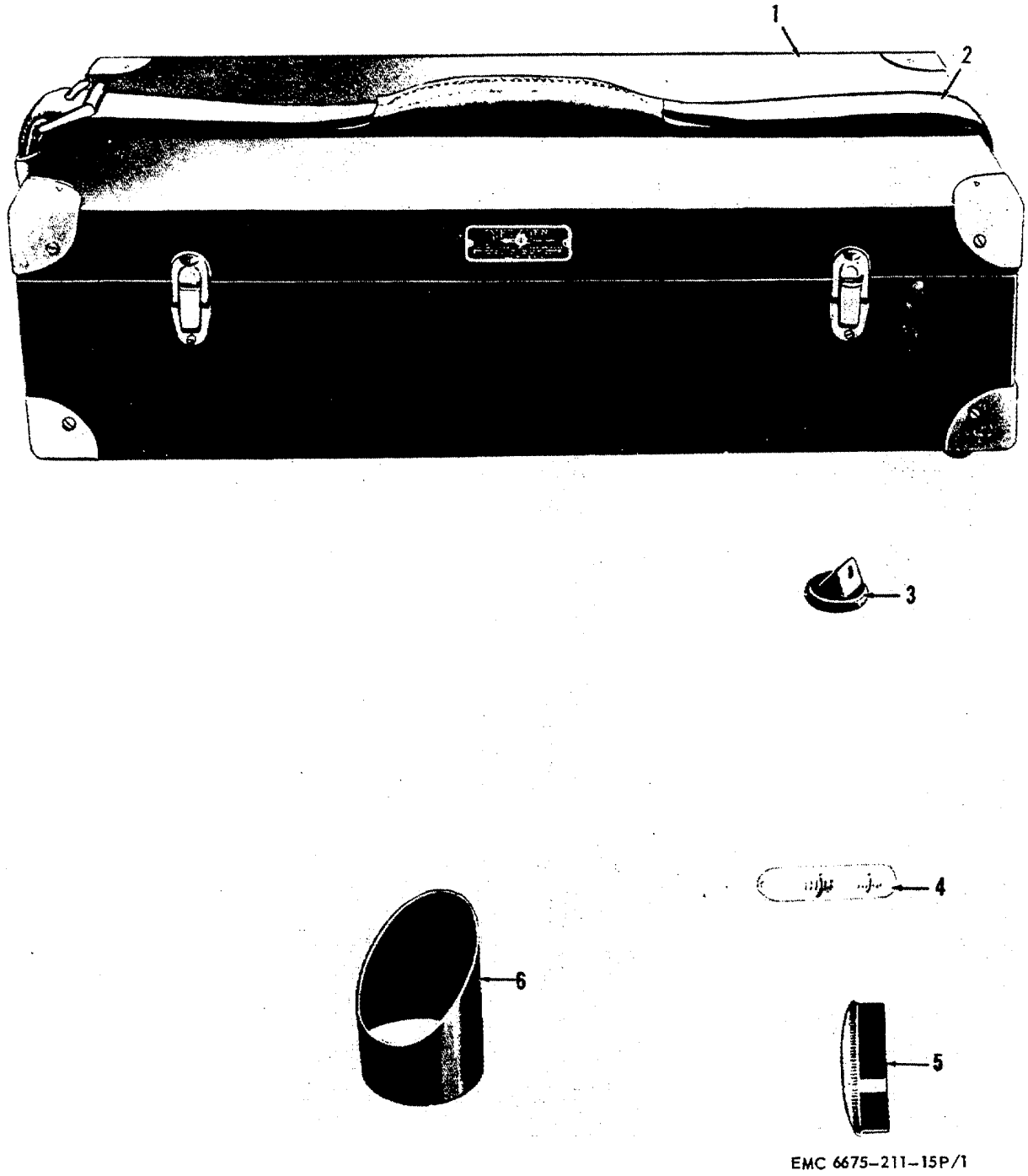
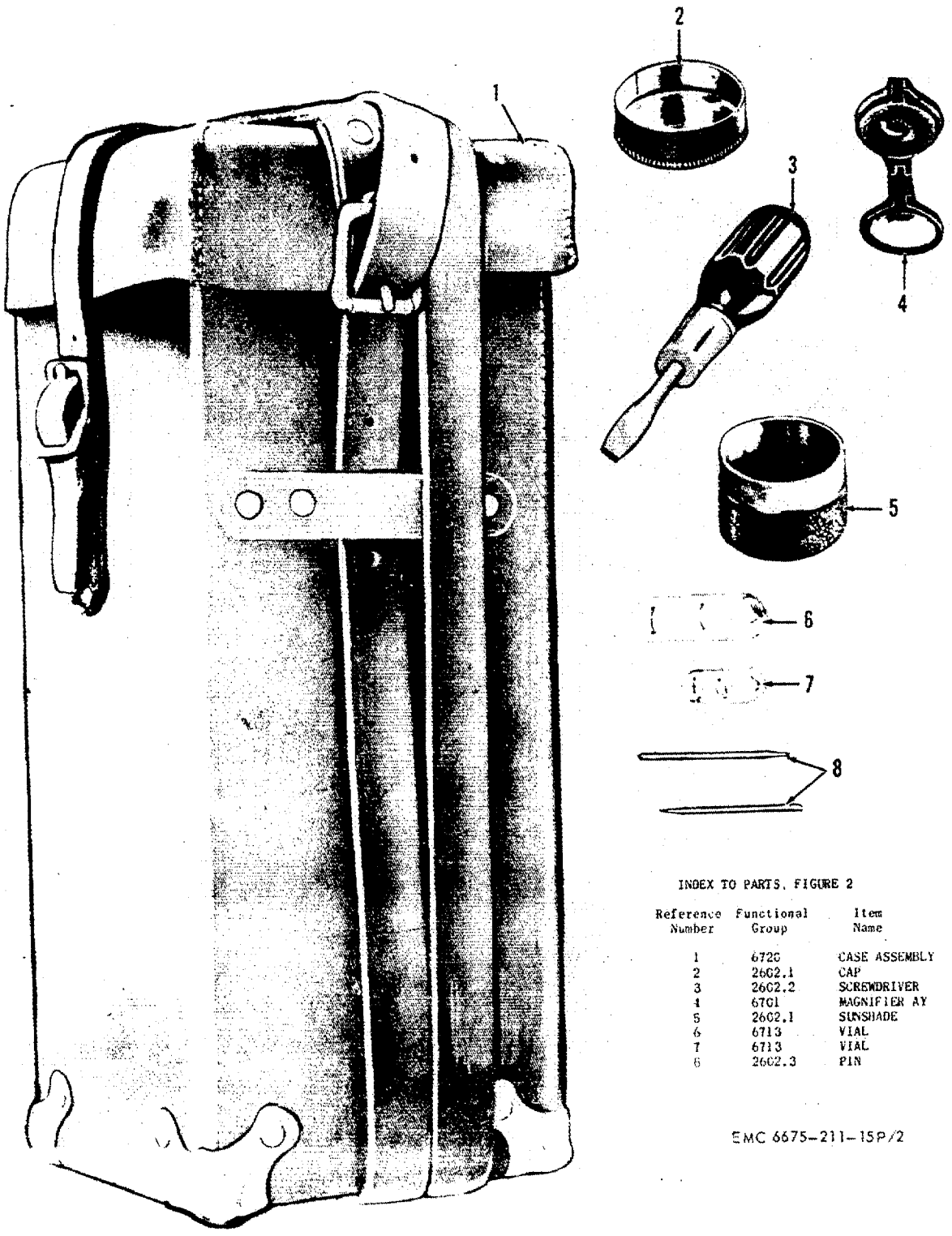


Figure 1. Case and Accessories for Model 6220.

INDEX TO PARTS. FIGURE 1

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6720	BOX ASSEMBLY	3	2602.1	STRAP ASSEMBLY	5	2602.1	CAP
2	2602.1	STRAP ASSEMBLY	4	6713	VIAL	6	2602.1	SHADE



INDEX TO PARTS, FIGURE 2

Reference Number	Functional Group	Item Name
1	6720	CASE ASSEMBLY
2	2602.1	CAP
3	2602.2	SCREWDRIVER
4	6701	MAGNIFIER AY
5	2602.1	SUNSHADE
6	6713	VIAL
7	6713	VIAL
8	2602.3	PIN

EMC 6675-211-15P/2

Figure 2. Case and Accessories for Model 6230.

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY							FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
									2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					6701 - ALIDADE (cont)									
	X2	F			GUARD, VERNIER (17866) SI2381			1		*	*	*	7	14
	X2	D			HOUSING: tangent spring, vernier (17866) SI2313			2				*	5	1
	X2	F			INDEX, HORIZONTAL: vernier (17866) SI2380			1		*	*	*	7	13
	X2	F			INDEX, VERTICAL: vernier (17866) SI2378			1		*	*	*		
	X2	F			KNOB, HOLDING: blade (17866) SI2301			2		*	*	*	7	15
	X2	D			PIN, STRAIGHT, HEADLESS: alidade blade "A" (17866) SI26			4				*	3	4
	X2	D			PIN, STRAIGHT, HEADLESS: alidade blade "B" (17866) SI26			2				*	8	6
	X2	D		6675-427-3477	PLUNGER: spring, alidade (17866) SI2311			2				*		
	X2	F			SCREW, MACHINE (17866) SI2410			5		*	*	*	4	10
	X2	D		5305-427-3502	SCREW, MACHINE: alidade brass; No 10-32 thd size, 7/32 in. lg "A" (17866) SI2411			4				*	3	5
	X2	F			SCREW, MACHINE: arc set mtg, fillister head, brass (17866) SI2415			3		See Group	9901	See Group 9901	5	3
	X2	D			SCREW, MACHINE: standard assy "A" (17866) SI2416			2				*		
	X2	D			SCREW, MACHINE: standard assy "B" (17866) SI2725			4				*		
	X2	D		5305-427-3503	SCREW, MACHINE: standard assy brass; No 6-40 thd size, 3/8 in. lg			4				*	4	1
	X2	D		5305-427-3439	SCREW, MACHINE: standard assy brass; No 8-36 thd size, 13/32 in. lg "A" (17866) SI1646			4				*	6	12
	X2	F			SCREW, MACHINE: vernier assy (17866) SI2409			6		*	*	*		
	X2	F			SCREW, MACHINE: vial bottom plate (17866) SI2415			1		See Group	9901	See Group 9901	5	3
	X2	F			SCREW ASSEMBLY: tangent (17866) SIA632			1		*	*	*	5	11
	X1				HOUSING: tangent screw (17866) SI2306			1					5	10
	X1				KNOB: screw, tangent (17866) SI2308			1						
	X1				SCREW: tangent (17866) SI2309			1						
	X2	F			SPACER: horizontal index, vernier (17866) SI2318			2		*	*	*		
	X2	F			SPACER: index, vernier (17866) SI2432			1		*	*	*		
	X2	D			SPRING, HELICAL, COMPRESSION: tangent housing (17866) SI2312			2				*		
	X2	D			STANDARD ASSEMBLY: alidade (17866) SIA618			1				*		
	X1				CAP, BEARING: standard assembly (17866) SI2304			2					4	2
	X1				PIN, STRAIGHT, HEADLESS: standard assembly (17866) SI2435			4						
	X1				STANDARD: alidade (17866) SI2303			1					3	2
	X2	F			WASHER, LOCK: cup, vernier assembly (17866) SI2734			1		*	*	*	3	1
					6707 - COMPASS									
	X2	F			COMPASS ASSEMBLY: trough (17866) SIA627			1		*	*	*	6	9
	X2	F			AXIS: compass lever (17866) SI2321			1		*	*	*		
	X2	F			BEARING, SLEEVE: compass (17866) SI2316			1		*	*	*		
	X2	F			CONE: needle lifter (17866) SI1530			1		*	*	*		
	X2	D			GLASS PLATE: trough compass (17866) SI2326			1				*	4	9

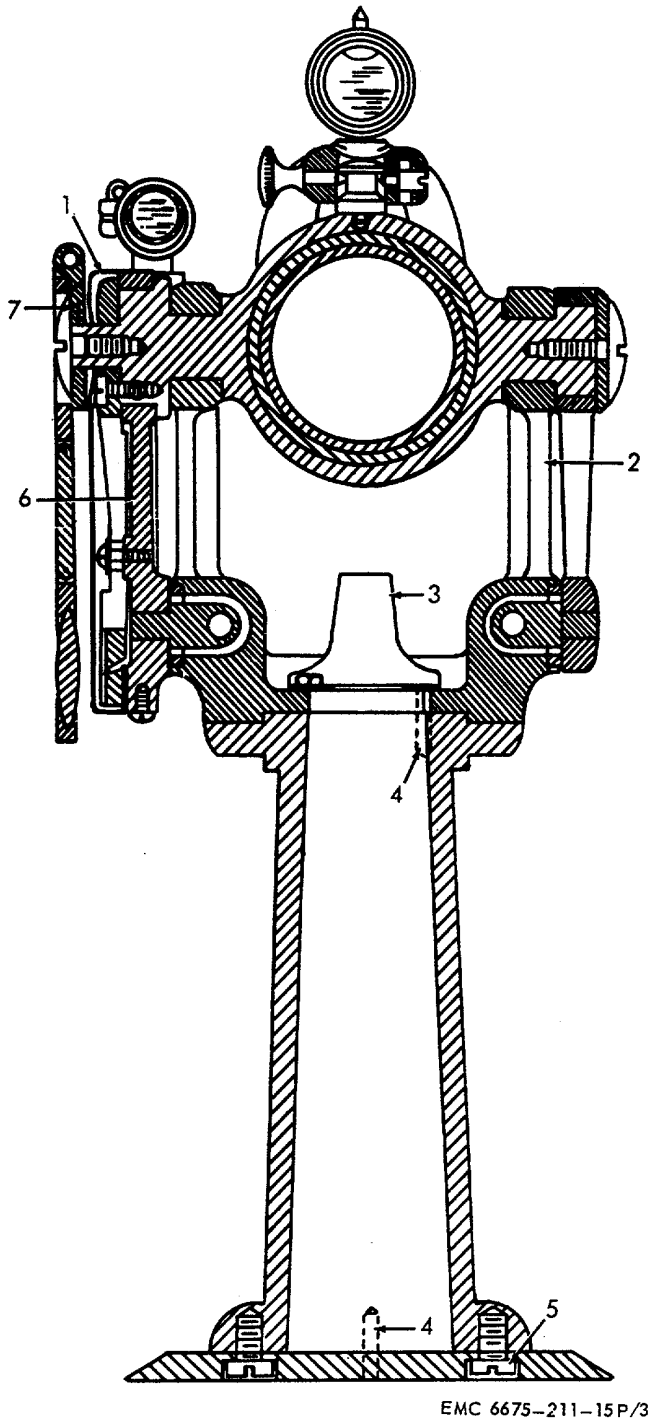


Figure 3. Cross Sectional View of Axis, Bumper, Vernier, Magnifier, and Arc, for Model 6220.

INDEX TO PARTS. FIGURE 3

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6701	WASHER	4	6701	PIN	6	6701	ARC
2	6701	STANDARD	5	6701	SCREW	7	6701	BRACKET
3	6701	BUMPER						

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION		UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY								FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
										2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					6707 - COMPASS (cont)										
	X1				HOUSING: compass	(17866) SI2315			1						
	X2	F			LEVER, ECCENTRIC: compass needle lifter	(17866) SI240-173			1		*	*	*		
	X2	F			LIFTER: needle, compass	(17866) SI240-171			1		*	*	*		
	X2	F		6675-353-3906	NEEDLE ASSEMBLY, MAGNETIC COMPASS	(17866) SIA644			1		*	*	*		
	X1				CAP ASSEMBLY: needle	(17866) SIA645			1						
	X1				CAP, NEEDLE	(17866) SI52			1						
	X1				JEWEL, NEEDLE	(17866) SI7562			1						
	X1				NEEDLE, COMPASS	(17866) SI1581			1						
	X2	D		6605-353-3905	PIVOT, NEEDLE WITH PIN ASSEMBLY	(17866) SIA610			1				*		
	X1				NEEDLE, PIVOT	(17866) SI770			1						
	X1				PIN, PIVOT	(17866) GP917			1						
	X2	F			SCREW, MACHINE: compass	(17866) SI551			1		*	*	*		
	X2	F		5305-427-3558	SCREW, MACHINE: compass	(17866) SI662			1		*	*	*	4	8
	X2	D			SCREW: needle cap	(17866) SI2328			2				*		
	X2	D			WASHER, FLAT: cup	(17866) SI222			1				*		
	X2	F		5305-427-3504	SCREW, MACHINE: compass brass; No. 4-48 thd size; 5/16 in. lg				2		*	*	*	4	7
					6713 - LEVELS										
	X2	F		5306-427-3523	BOLT EYE: level, nickel silver, No. 2-56 thd size, 11/32 in. lg				1		*	*	*	7	2
	X2	F		6675-308-7286	LEVEL, STRIDING, ALIDADE "A"	(17866) SIA635			1		*	*	*	6	2
	X1				BASE: striding level "A"	(17866) SI2393			1						
	X2	F			GUIDE, SPRING: striding level "A"	(17866) SI2396			1		*	*	*		
	X2	F		5310-427-3490	NUT, PLAIN, ROUND: striding level "A"	(17866) SI2407			2		*	*	*		
	X2	F			NUT, PLAIN: striding level "A"	(17866) SI2398			1		*	*	*		
	X2	F			PIN, STRAIGHT, HEADLESS: level "A"	(17866) SI2436			1		*	*	*		
	X2	F			RELEASE, SPRING: level "A"	(17866) SI2397			1		*	*	*		
	X2	F			SCREW: holding, level "A"	(17866) SI2400			1		*	*	*		
	X2	F			SCREW, MACHINE: level "A"	(17866) SI3031			1		*	*	*		
	X2	F			SPRING, LOCK: level "A"	(17866) SI2395			1		*	*	*		
	X1				STUD, PLAIN: level adjusting "A"	(17866) SI2392			1						
	X2	F			SUPPORT, VIAL: level "A"	(17866) SI2325			1		*	*	*		
	X2	F			VIAL ASSEMBLY: striding level "A"	(17866) SIA636			1		*	*	*		
	X1				END: vial housing "A"	(17866) SI2403			1						
	X1				END: vial housing "A"	(17866) SI2431			1						
	X1				GUARD: vial housing "A"	(17866) SI2405			1						
	X1				HOUSING: vial "A"	(17866) SI2402			1						
	X2	F			SCREW: capstan "A"	(17866) SI2422			2		*	*	*		
	X2	F			SCREW, MACHINE: level "A"	(17866) SI2404			1		*	*	*		

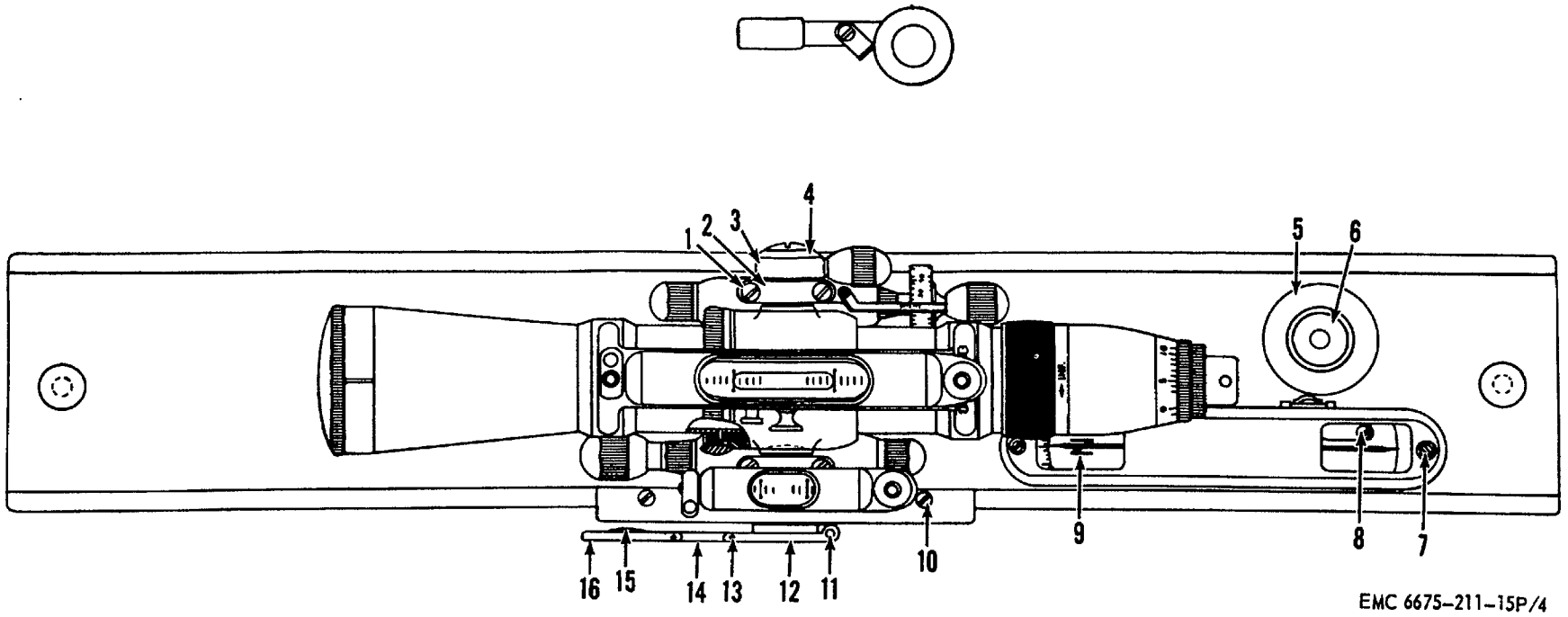


Figure 4. Top View of Tangent Spring Housing, Clamp Screw, Gradienter, and Vial for Model 6220.

INDEX TO PARTS. FIGURE 4

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6701	SCREW	5	6713	HOUSING	9	6707	GLASS PLATE	13	6701	PIN
2	6701	CAP	6	6713	VIAL	10	6701	SCREW	14	6701	LINK
3	6725.1	LEVER	7	6707	SCREW	11	6701	PIN	15	6701	LENS
4	6725.1	WASHER	8	6707	SCREW	12	6701	ARM	16	6701	HOLDER

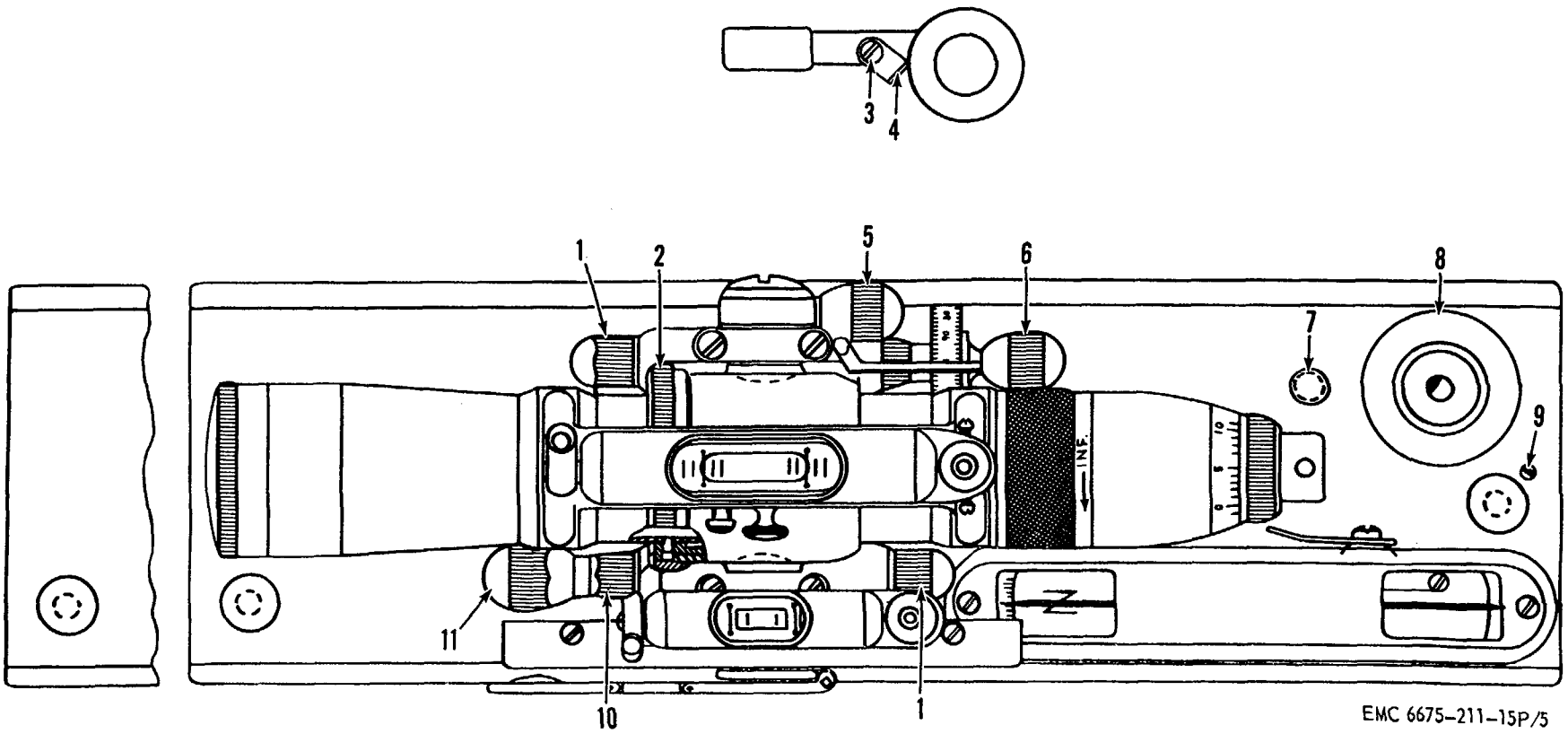


Figure 5. Top View of Tangent Spring Housing, Tangent Screw, Gradienter, Vial, and Compass for Model 6230.

INDEX TO PARTS. FIGURE 5

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6701	HOUSING	4	6701	ARM	7	6713	SUPPORT	10	6701	HOUSING
2	6725.1	RING	5	6725.1	SCREW ASSEMBLY	8	6713	VIAL ASSEMBLY	11	6701	SCREW ASSEMBLY
3	6713	SCREW	6	6701	GRADIENT AY	9	6713	SCREW			

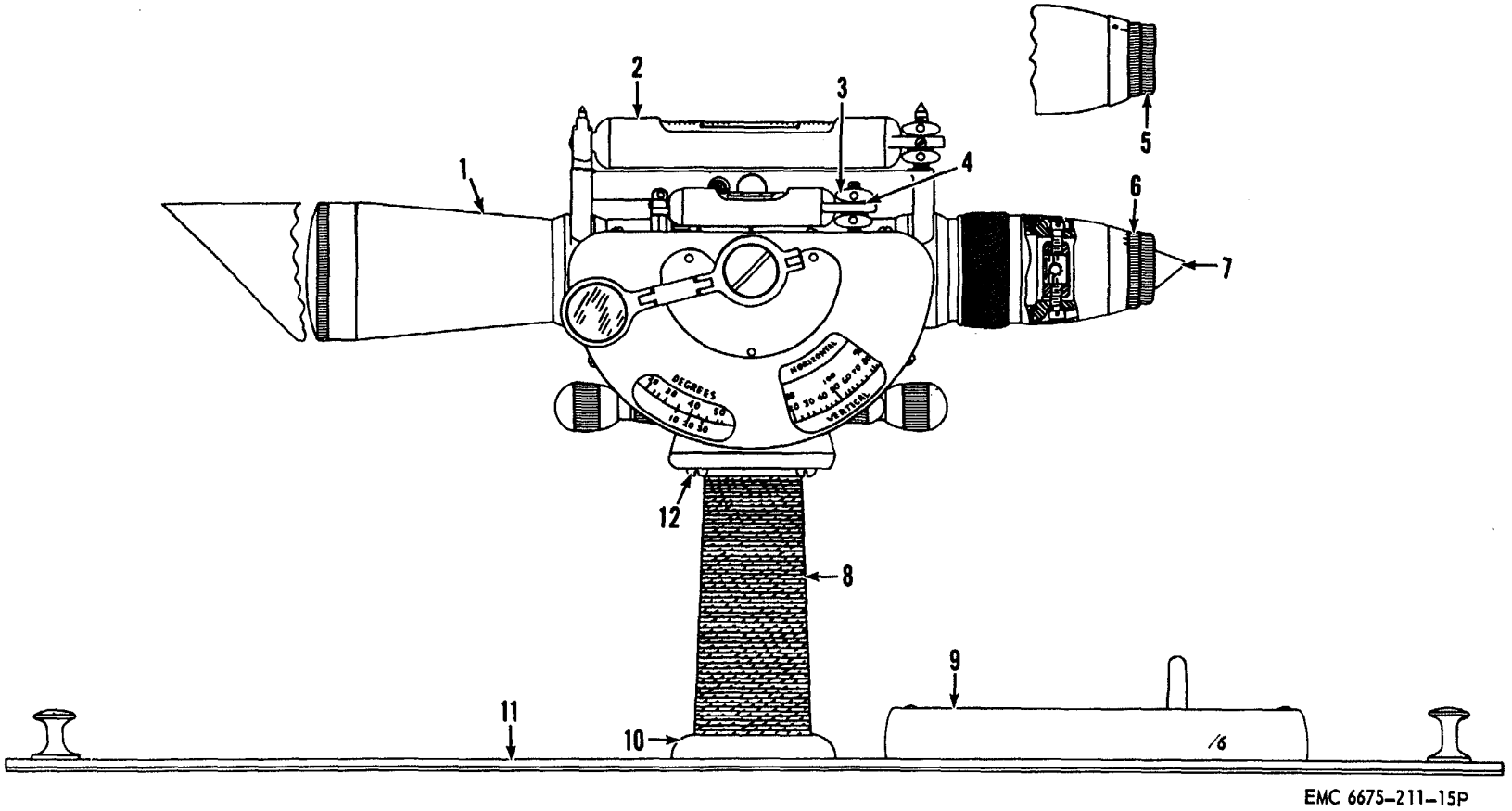


Figure 6. Telescope, Level, Vial, Column, and Aligning Blade for Model 6220.

INDEX TO PARTS. FIGURE 6

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6725.1	TELESCOPE AY	4	6713	WASHER	7	6725	CAP ASSEMBLY	10	6701	COLUMN
2	6713	LEVEL	5	6725	CAP	a	6701	CORD	11	6701	BLADE
3	6713	NUT	6	6725	GUARD	9	6707	COMPASS ASSEMBLY	12	6701	SCREW

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY							FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
									2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					6675 - LEVELS (cont)									
	P1	F		6675-392-4510	VIAL, STRIDING LEVEL "A" (17866) SI2401			1		*	*	25	1	4
	X2	F		5310-427-3497	WASHER, BALL SEAT: level "A" (17866) SI2406			2		*	*	*		
	X2	F			LEVEL ASSEMBLY: striding "B" (17866) SIA658			1		*	*	*	7	3
	X1	F			BASE: striding level "B" (17866) SI2735			1						
	X2	F			GUIDE, SPRING: striding level "B" (17866) SI2396			1		*	*	*		
	X2	F		5310-427-3498	NUT, PLAIN ROUND: level "B" (17866) SI2407			1		*	*	*		
	X2	F			NUT, PLAIN: level "B" (17866) SI2398			2		*	*	*		
	X2	F			PIN, STRAIGHT, HEADLESS: level "B" (17866) SI2436			2		*	*	*		
	X2	F			RELEASE, SPRING: level "B" (17866) SI2397			1		*	*	*		
	X2	F			SCREW: holding, level "B" (17866) SI2400			1		*	*	*		
	X2	F			SCREW, MACHINE: level "B" (17866) SI3031			1		*	*	*		
	X2	F			SPRING, LOCK: level "B" (17866) SI2395			1		*	*	*		
	X1				STUD, PLAIN: level "B" (17866) SI2392			1						
	X2	F			SUPPORT: vial "B" (17866) SI2325			1		*	*	*		
	X2	F			VIAL ASSEMBLY: striding level "B" (17866) SIA659			1		*	*	*		
	X1				END: vial housing "B" (17866) SI2403			1						
	X1				END: vial housing "B" (17866) SI2431			1						
	X1				GUARD: vial housing "B" (17866) SI2728			1						
	X1				HOUSING: vial "B" (17866) SI2727			1						
	X2	F			SCREW: capstan "B" (17866) SI2422			1		*	*	*		
	X2	F			SCREW, MACHINE: level "B" (17866) SI2404			1		*	*	*		
	P1	F		6675-392-4511	VIAL, LEVEL: level, alidade "B" (17866) SI2723			1		*	*	25	2	6
	X2	F		5310-427-3497	WASHER, BALL SEAT: socket, level "B" (17866) SI2406			1		*	*	*	6	4
	X2	F		5310-427-3498	NUT, PLAIN ROUND: level (17866) SI2407			2		*	*	*	6	3
	X2	F			SCREW, MACHINE: level (17866) SI2415			3		See Group	9901	See Group 9901	5	3
	X2	F			SCREW, MACHINE: mtg plate, level "B" (17866) SI2724			2		*	*	*	5	9
	X2	F		6675-679-4938	STUD, PLAIN: vial adjusting (17866) SI2423			1		*	*	*	7	5
	X2	F			SUPPORT, STUD: striding level "B" (17866) SI2701			1		*	*	*	5	7
	X2	F			SUPPORT: vial (17866) SI2324			1		*	*	*	7	1
	X2	F			VIAL ASSEMBLY: circular (17866) SIA672			1		*	*	*	5	8
	X1				HOUSING: circular vial (17866) SI2749			1					4	5
	P1	F		6675-378-9217	VIAL LEVEL: circular, geological (17866) SI2750			1		*	*	15	4	6
	X2	F			VIAL ASSEMBLY: vernier level (17866) SIA634			1		*	*	*	7	4
	X1				END: vial housing (17866) SI2387			1						
	X1				END: vial housing (17866) SI2430			1						
	X1				GUARD: vial (17866) SI2388			1						
	X1				HOUSING: vial (17866) SI2386			1						
	X2	F			SCREW, MACHINE: level (17866) SI3118			2		*	*	*		
	X2	F		6675-378-9216	VIAL: vernier level (17866) SI2385			1		*	*	*	2	7
	X2	F		5310-427-3497	WASHER, BALL SEAT: ball socket, level (17866) S12406			2		*	*	*		
	X2	F			WASHER, FLAT: circular vial housing (17866) SI2429			1		*	*	*		

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY							FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
									2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					6720 - BOXES, CARRYING CASES									
	X2	O			BOX ASSEMBLY: alidade "A" (17866) SIA640			1	*	*	*	*	1	1
	X2	O			BOX ASSEMBLY: alidade "A" (17866) SIA641			1	*	*	*	*		
	X2	O			HINGE, BOX: alidade "A" (17866) GP904			2	*	*	*	*		
	X2	O			SCREW, WOOD: alidade box "A" (17866) GP48			20	*	*	*	*		
	X2	O			BURR: copper, alidade box "A" (17866) GP905			2	*	*	*	*		
	X2	O			CATCH, SAMPLE CASE "A" (17866) GP458			2	*	*	*	*		
	X2	O			CORNER: box "A" (17866) SI913			8	*	*	*	*		
	X2	O			EYE: end mark "A" (17866) SI2425			1	*	*	*	*		
	X2	O			FITTING SET "A" (17866) SIA642			1	*	*	*	*		
	X2	O			HOLDER, BRUSH "A" (17866) SI3136			1	*	*	*	*		
	X2	O			NAIL, ESCUTCHEON "A" (17866) GP822			1	See Group 2210	See Group	2210	See Group 2210		
	X2	O			NAIL, ESCUTCHEON "A" (17866) GP824			2	*	*	*	*		
	X2	O			PLATE, IDENTIFICATION "A" (17866) L552			1	See Group 2210	See Group	2210	See Group 2210		
	X2	O		6675-631-3391	PRISM ATTACHMENT "A" (17866) SI2420			1	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP102			2	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP202			20	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP203			4	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP207			7	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP211			2	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP22			2	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP224			2	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP36			4	*	*	*	*		
	X2	O			SCREW, WOOD "A" (17866) GP39			8	*	*	*	*		
	X2	O			TIP: rubber "A" (17866) GP924			4	*	*	*	*		
	X2	O			WASHER, FLAT "A" (17866) GP986			4	*	*	*	*		
	X2	O		6675-160-7941	CASE ASSEMBLY, CARRYING: alidade, telescopic "B" (17866) 8IA660			1	*	*	*	*	2	1
	X1	O			BUCKLE: shoe "B" (17866) GP965			2						
	X1	O			CORNER: case "B" (17866) SI2737			4						
	X1	O			NAIL: case "B" (17866) GP878			4						
	X1	O			RIVET, HARNESS: case "B" (17866) SI2739			10						
	X1	O			RIVET, HARNESS: case "B" (17866) SI2738			16						
	X1	O			SCREW, WOOD "B" (17866) GP23			6						
	X1	O			WOOD PARTS SET "B" (17866) SIA661			1						
					6725 - OPTICAL COMPONENTS									
	X2	O			CAP, EYEPIECE "A" (17866) SI2357			1	*	*	*	*	6	5
	X2	O			CAP ASSEMBLY: prismatic eyepiece "A" (17866) SIA633			1	*	*	*	*	6	7
	X1				BASE: prism housing "A" (17866) SI2370			1						
	X1				CAP, EYEPIECE: prism "A" (17866) SI2371			1						

	X1				HOUSING: prism "A"	(17866) SI2369			1						
	X1				PLATE: prism base "A"	(17866) SI2372			1						
	X1				PRISM: eyepiece "A"	(17866) SI2368			1						
	X2	D			SCREW, MACHINE: prism "A"	(17866) SI626			2				*		
	X2	O			CAP ASSEMBLY: prismatic eyepiece "B"	(17866) SIA655			1	*	*	*	*	7	7
	X1				BASE: prism housing "B"	(17866) SI2370			1				*		
	X1				CAP, EYEPIECE: prism "B"	(17866) SI2717			1						
	X1				HOUSING: prism "B"	(17866) SI2369			1						
	X1				PLATE: prism base "B"	(17866) SI2372			1						
	X1				PRISM: eyepiece "B"	(17866) SI2368			1						
	X2	D			SCREW, MACHINE: prism "B"	(17866) SI626			2				*		
	X2	O			COVER: eye end	(17866) SI2361			1	*	*	*	*		
	X2	F			EYEPIECE ASSEMBLY: alidade	(17866) SIA631			1		*	*	*		
	X2	D			CELL: eye lens	(17866) SI2348			1				*		
	X2	D			LENS, EYE	(17866) SI2349			2				*		
	X2	D			RING: eye lens cell "A,B"	(17866) SI2353			1				*		
	X2	D			SCREW: guide, eyepiece	(17866) SI2354			1				*		
	X2	D			SLEEVE: eyepiece	(17866) SI2347			1				*		
	X2	D			SPACER: eyepiece	(17866) SI2350			2				*		
	X2	D			GUARD: eyepiece sleeve "A"	(17866) SI2355			1				*	6	6
	X2	D			HEAD: eyepiece	(17866) SI2343			1				*		
	X2	D			LENS, INTERNAL "A"	(17866) SI2337			1				*		
	X2	D			LENS, INTERNAL "B"	(17866) SI2715			1				*		
	X2	D			LENS, OBJECTIVE: telescope "A"	(17866) SI2359			1				*		
	X2	D			LENS ASSEMBLY, OBJECTIVE: telescope "B"	(17866) SI2719			1				*		
	X2	F			MAGNIFIER ASSEMBLY	(17866) SIA657			1		*	*	*	2	4
	X1				ARM: magnifier	(17866) SI2730			1					4	12
	X1				BRACKET: magnifier arm	(17866) SI2729			1					3	7
	X1				HOLDER: lens, magnifier	(17866) SI2731			1					4	16
	X1				LENS: magnifier	(17866) SI2732			1					4	15
	X1				LINK: magnifier arm	(17866) SI2736			1					4	14
	X2	D			PIN: magnifier	(17866) SI2433			1				*	4	11
	X2	D			PIN: magnifier	(17866) SI2434			2				*	4	13
	X1				RING: lens, magnifier	(17866) SI2733			1						
	X2	F			SCREW, MACHINE: eyepiece	(17866) SI2356			1		*	*	*		
					6725.1 - TELESCOPE ASSEMBLY										
	X2	D			AXIS, TELESCOPE	(17866) SI2363			1				*	8	1
	X2	D			DIAPHRAGM, TELESCOPE	(17866) SI2344			1				*	7	8
	X2	D			GUARD: eyepiece sleeve "A"	(17866) SI2355			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			GUIDE, FOCUSING NUT "A"	(17866) SI2341			1				*		
	X2	D			HEAD: eye piece "A"	(17866) SI2343			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			LENS, INTERNAL "A"	(17866) SI2337			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			LENS, OBJECTIVE: telescope "A"	(17866) SI2359			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			NUT, FOCUSING "A"	(17866) SI2342			1				*		
	X2	D			RING: eye lens cell "A"	(17866) SI2353			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			RING, OBJECTIVE CELL "A"	(17866) SI2360			1				*		
	X2	D			SCREW, MACHINE "A"	(17866) SI2340			1				*		

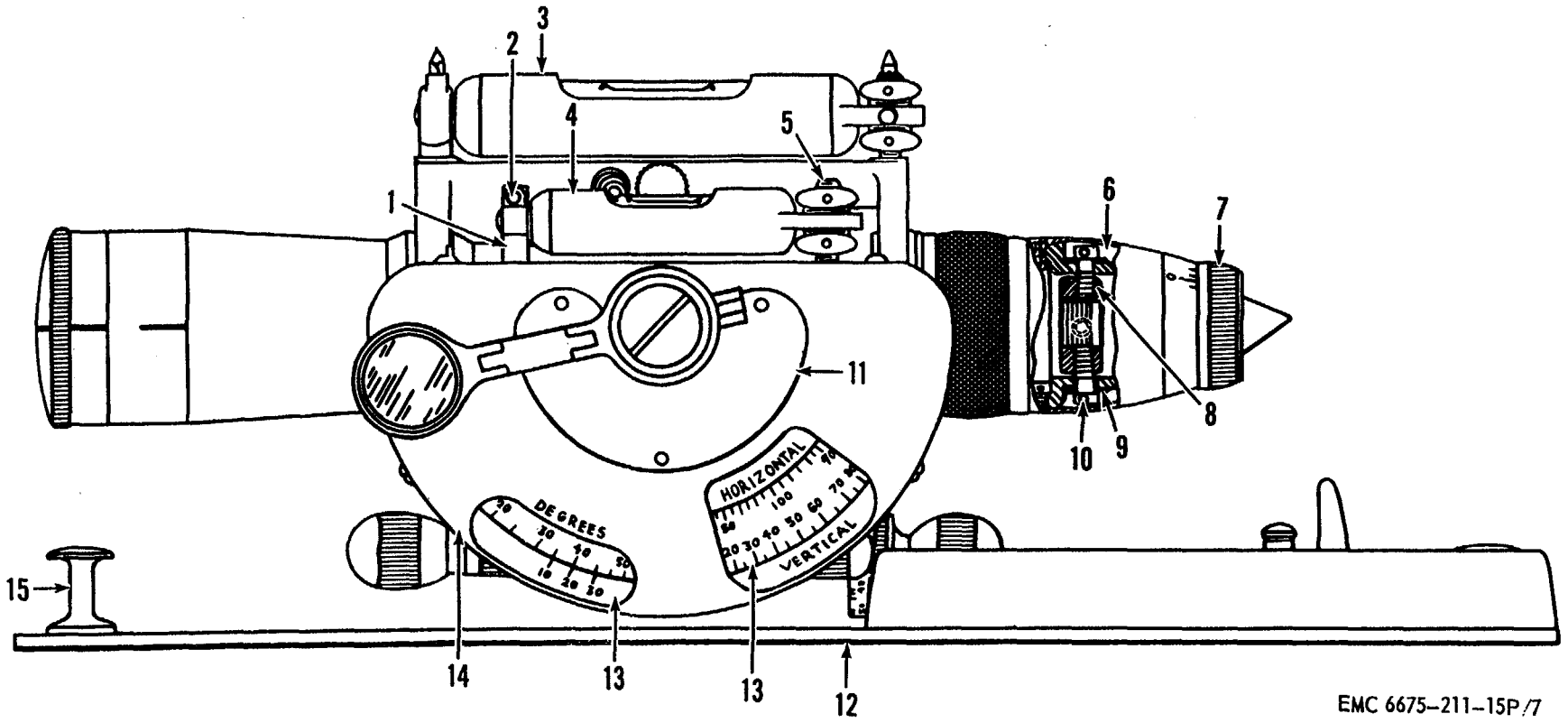


Figure 7. Telescope, Level, Vial, and Aligning Blade for Model 6230.

INDEX TO PARTS. FIGURE 7

Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name	Reference Number	Functional Group	Item Name
1	6713	SUPPORT	5	6713	STUD	9	6725.1	WASHER	13	6701	COLUMN
2	6713	BOLT EYE	6	6725.1	TELESCOPE AY	10	6725.1	SCREW	14	6701	BLADE
3	6713	LEVEL ASSEMBLY	7	6725	CAP ASSEMBLY	11	2210	COMPASS ASSEMBLY	15	6701	SCREW
4	6713	VIAL ASSEMBLY	8	6725.1	DIAPHRAGM	12	6701				

INDEX TO PARTS, FIGURE 8

Reference Number	Functional Group	Item Name
1	6725.1	AXIS
2	6725.1	STUD
3	6725.1	SCREW
4	6725.1	STUD
5	6725.1	SEAL
6	6701	PIN
7	**6701**	**VERNIER ASSEMBLY**
8	6701	ARC

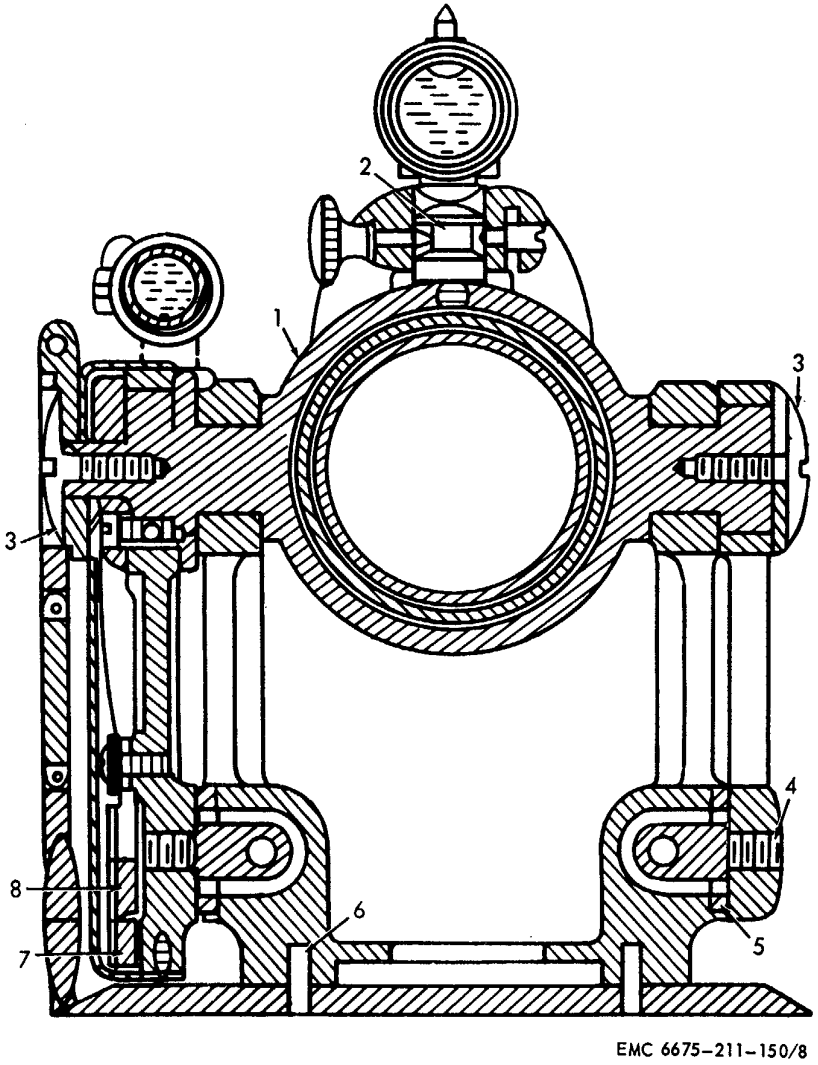


Figure 8. Cross Sectional View of Axis, Slow Motion Lever, Standard, Vernier, and Arc for Model 6230.

SOURCE CODES				FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	EXPENDABILITY	QUANTITY INCORPORATED IN UNIT	15 DAYS ORGANIZATIONAL MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	GUIDE QUANTITIES PER 100 EQUIPMENTS			ILLUSTRATIONS	
TECHNICAL SERVICE	SOURCE	MAINTENANCE	RECOVERABILITY							FIELD MAINTENANCE 15-DAY LEVEL		DEPOT MAINTENANCE	FIG. NO.	ITEM NO.
									2ND ECH	3RD ECH	4TH ECH	5TH ECH		
					6725.1 - TELESCOPE ASSEMBLY (cont)									
	X2	D			SETSCREW: slide tube "A" (17866) SI2317			2				*		
	X2	D			TUBE ASSEMBLY, SLIDE "A" (17866) SIA630			1				*		
	X1	D			MOUNTING, INTERNAL LENS "A" (17866) SI2336			1						
	X1				RING, REINFORCEMENT "A" (17866) SI2745			1						
	X1				TUBE SLIDE "A" (17866) SI2339			1						
	X2	D			TUBE ASSEMBLY: telescope "A" (17866) SIA629			1				*		
	X1				BEARING, SLEEVE: tube "A" (17866) SI2331			1						
	X2	D			HEAD, TELESCOPE "A" (17866) SI2334			1				*		
	X2	D			RING, SPACER "A" (17866) SI2329			2				*		
	X1				SADDLE, TELESCOPE TUBE "A" (17866) SI2332			2						
	X1				TUBE, FOCUSING GUIDE "A" (17866) SI2335			1						
	X1				TUBE, TELESCOPE "A" (17866) SI2330			1						
	X2	D			LEVER, SLOW MOTION (17866) SI2373			1				*	4	3
	X1				KEY, CLAMP (17866) SI829			1						
	X2	D			RING, HOLDING: telescope (17866) SI2365			1				*	5	2
	X2	F		5305-427-3464	SCREW, MACHINE: nickel silver; No. 4-48 thd, 5/16 in. lg			4		*	*	*	7	10
	X2	F			SCREW, MACHINE (17866) SI2351			1		*	*	*		
	X2	D			SEAL, PLAIN: tangent stud (17866) SI2307			2				*	8	5
	X2	F			STUD, PLAIN: tangent (17866) SI2310			2		*	*	*	8	4
	X2	F		6675-427-3488	STUD, STRIDING LEVEL (17866) SI2362			1		*	*	*	8	2
	X2	D			TELESCOPE ASSEMBLY "A" (17866) SIA628			1				*	6	1
	X2	O		6675-160-7934	CAP, OBJECTIVE "A" (17866) SI2366			1	*	*	*	*		
	X2	D			CELL, OBJECTIVE "A" (17866) SI2358			1				*		
	X2	O			COVER: eye end "A" (17866) SI2361			1	See Group 6725	See Group	6725	See Group 6725		
	X2	F			EYEPIECE ASSEMBLY: alidade "A" (17866) SIA631			1	See Group 6725	See Group	6725	See Group 6725		
	X2	D			TELESCOPE ASSEMBLY "B" (17866) SIA653			1				*	7	6
	X2	D			CELL, OBJECTIVE "B" (17866) SI2718			1				*		
	X2	O			COVER: eye end "B" (17866) SI2361			1	See Group 6725	See Group	6725	See Group 6725		
	X2	F			EYEPIECE ASSEMBLY, ALIDADE "B" (17866) SIA631			1		See Group	6725	See Group 6725		
	X2	D			GUIDE, FOCUSING NUT "B" (17866) SI2341			1				*		
	X2	D			HEAD: eyepiece "B" (17866) SI2343			1				See Group 6725		
	X2	D			LENS, INTERNAL "B" (17866) SI2715			1				See Group 6725		
	X2	D			LENS ASSEMBLY, OBJECTIVE: telescope "B" (17866) SI2719			1				See Group 6725		
	X2	D			NUT, FOCUSING "B" (17866) SI2716			1				*		
	X2	D			RING: eye lens cell "B" (17866) SI2353			1				See Group 6725		
	X2	D			RING, OBJECTIVE CELL "B" (17866) SI2720			1				*		
	X2	D			SCREW, MACHINE "B" (17866) SI2340			1				*		
	X2	D			SETSCREW: slide tube "B" (17866) SI2317			2				*		
	X2	D			TUBE ASSEMBLY, SLIDE "B" (17866) SIA295			1				*		
	X1				MOUNTING, INTERNAL LENS "B" (17866) SI2336			1						

	X1				RING, REINFORCEMENT "B"	(17866) SI2745			1						
	X1				TUBE, SLIDE "B"	(17866) SI2339			1						
	X2	D			TUBE ASSEMBLY, TELESCOPE "B"	(17866) SIA654			1				*		
	X1				BEARING, SLEEVE "B"	(17866) SI2331			1						
	X2	D			HEAD, TELESCOPE "B"	(17866) SI2713			1				*		
	X2	D			RING, SPACER "B"	(17866) SI2329			2				*		
	X1				SADDLE, TELESCOPE TUBE "B"	(17866) SI2332			1						
	X1				SADDLE, TELESCOPE TUBE "B"	(17866) SI2740			1						
	X1				TUBE, FOCUSING GUIDE "B"	(17866) SI2714			1						
	X1				TUBE, TELESCOPE "B"	(17866) SI2712			1						
	X2	D			SCREW, MACHINE: telescope axis	(17866) SI2384			2				*	8	3
	X2	F		6675-335-9362	SCREW ASSEMBLY: clamp	(17866) SIA637			1		*	*	*	5	5
	X1				KNOB, SCREW: clamp, axis	(17866) SI2374			1						
	X1				SCREW, CLAMP AXIS	(17866) SI2375			1						
	X2	D		3310-427-3483	WASHER, DIAPHRAGM SCREW: eyepiece	(17866) SI2345			4					7	9
	X2	D			WASHER, FLAT: telescope axis screw	(17866) SI2383			1				*	4	4
					9901 - PARTS PECULIAR WITH MORE THAN ONE APPLICATION										
	X2	F			SCREW, MACHINE	(17866) SI2415			7		*	*	*		
					SECTION IV, SPECIAL TOOL LISTS GROUP 26 ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS 2602.3 · SPECIAL TOOLS NOTE: If these items are not components of authorized TOE TOOL SETS, a quantity necessary for the performance of assigned maintenance mission is authorized per using unit										
	P1	O		6675-641-3525	PIN: adjusting, surveying instrument, steel, 0.067 in. dia, 2 1/2 in. lg (GE)	(17866) SI279		NX						2	8

FEDERAL STOCK NUMBER AND PART NUMBER INDEX

1. General

The maintenance allocation chart lists all maintenance and repair operations authorized for the various echelons.

2. Maintenance

Maintenance is any action taken to keep material in a serviceable condition or to restore it to serviceability when it is unserviceable. Maintenance of material includes the following:

a. *Service*. To clean, to preserve, and to replenish fuel and lubricants.

b. *Adjust.* To regulate periodically to prevent malfunction.

c. Inspect. To verify serviceability and to detect incipient mechanical failure by scrutiny.

d. *Test.* To verify serviceability and to detect incipient mechanical failure by use of special equipment such as gages, meters, and other test devices.

e. *Replace.* To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.

f. *Repair*. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes but is not limited to, inspecting, cleaning, preserving, adjusting, replacing, welding, riveting, and straightening.

g. *Overhaul.* To restore an item to completely serviceable condition as prescribed by serviceability standards developed and published by heads of technical services. This is accomplished through employment of the technique of "inspect and repair only as necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.

3. Explanation of Columns

a. *Functional Group*. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes are taken from the Corps of Engineers functional grouping indexes, and appear on the maintenance allocation chart in their correct numerical sequence. These ALLOCATION

indexes are normally set up according to their proximity to each other and their function.

b. *Components and Related Operation*. This column contains the functional index grouping heading, subgroup headings, and a brief description of the part starting with the noun name. It also designates the operation to be performed such as service, adjust, inspect, test, replace, repair, and overhaul.

c. *Echelon Maintenance*.

(1) First echelon. First echelon maintenance is that maintenance performed by the user or operator of the equipment, such as servicing, cleaning, lubricating, and limited adjustments. It also includes removal and replacement of items to accomplish servicing and lubricating.

(2) Second echelon. Second echelon maintenance is that maintenance performed by trained personnel provided for that purpose in the using organization, such as replacement of all items in column 2, limited parts fabrication from bulk material, adjustments, and repair of assemblies, components, and end items that can be accomplished without extensive disassembly.

(3) Third echelon. Third echelon maintenance is that maintenance performed by specially trained units in direct support of the using organization, such as replacement of all items in columns 2 and 3, repair assemblies, components, and end items, and fabricate parts from bulk material.

(4) Fourth echelon. Fourth echelon maintenance is that maintenance performed by units organized as semi-fixed or permanent shops to serve lower echelon maintenance within a geographical area, such as replacement of items in columns 2, 3, and 4, repair end items, overhaul assemblies, components, and fabricate general use common hardware and parts.

(5) Fifth echelon. Fifth echelon maintenance is that maintenance authorized to overhaul assemblies, components, end items, and replacement of all parts in columns 2, 3, 4, and 5.

d. *Symbol X*. The symbol X placed in the appropriate column indicates the lowest echelon responsible for performing that particular maintenance operation, but does not necessarily indicate repair parts will be stocked at that level.

e. *Remarks*. The remarks column is used to explain why maintenance, that would normally be done at a lower echelon, is moved to a higher echelon because of some peculiarity in the construction of the end item.

MAINTENANCE ALLOCATION CHART

(1) Functional group	COMPONENT and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
67	Precision and Topographical Instruments.						
6701	Alidade.						
	Alidade:						
	Service	X					External
	Adjust.	X					External
	Repair -					X	
	Overhaul--					X	
	Arc set, Vernier:						
	Replace			X			
	Blade, aligning:						
	Replace			X			
	Column, pedestals						Model 6220 Only.
	Replace					X	
	Cord, braided:						
	Replace			X			
	Gradienter assembly:						
	Replace			X			
	Repair					X	
	Index, horizontal, Vernier:						
	Replace			X			
	Index, vertical, Vernier:						
	Replace			X			
	Screw assembly, clamp:						
	Replace			X			
	Repair					X	
	Screw assembly, tangent:						
	Replace-			X			
	Repair					X	
	Standard assembly, alidade:						
	Repair					X	
	Magnifier assembly:						
	Service	X					External
	Replace			X			
	Repair					X	
6707	Compass.						
	Compass assembly, trough:						
	Service	X					External
	Adjust	X					External
	Replace			X			
	Repair			X			
	Overhaul					X	
6713	Levels (All Types).						
	Level assembly, striding:						
	Adjust -	X					
	Repair-			X			

MAINTENANCE ALLOCATION CHART-- Continued

(1) Functional group	COMPONENT and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
	Vial assembly, circular:						
	Adjust	X					
	Repair			X			
	Vial assembly, Vernier level:						
	Adjust	X					
	Repair			X			
6720	Boxes, Carrying Cases.						
	Box assembly, alidade						Model 6220 Only.
	Repair		X				
	Strap assembly, alidade						Model 6220 Only.
	Repair -			X			
	Carrying case, alidade telescopic						Model 6280 Only.
	Repair			X			
6725	Optical Components.						
	Cap, eyepiece						Model 622 Only.
	Replace	X					
	Cap assembly, prismatic eyepiece:						
	Replace	X					
	Repair					X	
	Eyepiece assembly:						
	Replace			X			
	Repair					X	
	Lens, internal:						
	Replace					X	
6725.1	Telescope Assembly.						
	Telescope assembly:						
	Service	X					External.
	Replace					X	
	Repair					X	
	Tube assembly, telescope:						
	Service	X					External.
	Repair					X	

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