7.1 SCOPE.

7.1.1 Purpose. This section establishes the numbering system for the identification of engineering drawings, parts, associated lists and documents referenced thereon.

7.1.2 Applicability of ASME Y14.100 is Mandatory. This standard establishes the essential requirements for assigning a numbering, coding and identification system for engineering drawings, associated lists and Part or Identifying Number (PIN) for identifying a specific item.

7.1.3 Applicability of Appendix D of ASME Y14.100-2004 for Drawing and Part Numbering by invoking Appendix D in the contract. The required standard for drawing and part number identification is ASME Y14.100-2004 and Appendix D replacing the application of MIL-STD-100G and its previous revisions back to basic issue is permissible provided one or both of the following conditions exists:

a. It is required and fully justifiable that a DoD activity be the design activity.

b. The applicable end item requires Government logistic support.

7.1.4 Limitation Placed on the Use of ASME Y14.100 and Appendix D for Drawing and Part Number Identification. When the requirement of MIL-STD-100G, or a previous revision is required, the standard must always be used in conjunction with ASME Y14.100 and Appendix D since this non-Government standard has largely replaced MIL-STD-100. Other than basic commercial applications are in Appendix D of ASME Y14.100.

7.2 APPLICABLE DOCUMENTS. Note: DoD Policy Memo 05-3 "Elimination of Waivers to Cite Military Specifications and Standards in Solicitation and Contracts" has eliminated the need for waivers to use MIL-SPECS and MIL-STDS on DoD contracts. (See PREFACE 1, Section 2)

MIL-STD-100	Engineering Drawing Practices (Use in conjunction with ASME Y14.100) (CNCLD Supsd by: ASME Y14.100 & Appendices, ASME Y14.24, 34M & 35M)
H4/H8	Commercial And Government Entity (CAGE)
DoD 4100.39M	Defense Integrated Data Systems (DIDS) Procedures Manual Vol 7. Establish/Maintenance of Organizational Entity and Provisioning
ASME Y14.34M	Parts Lists, Data Lists, Index Lists and Identured Lists
ASME Y14.100	Engineering Drawing Practices
IEEE STD 200	Reference Designations for Electrical and Electronic Parts and Equipments
IEEE STD 315 & Supl 315a	Graphic Symbols for Electrical and Electronic Diagrams
ISO 6433	Technical Drawings – Item References

7.3 DEFINITIONS. (Alphabetically Listed)

7.3.1 Assembly. Two or more parts, items, and/or subassemblies that are joined together to perform a specific function. Assemblies are classified as lower assemblies, subassemblies and major assemblies.

7.3.2 Assembly Installation Drawing. An assembly drawing that delineates an assembly of parts and calls out some parts as "installation parts" to be installed at a higher level. Normally the assembly is established as a subassembly for spares procurement with a separate assembly installation number, which contains the subassembly with the "installation parts". The drawing usually contains installation illustrations and instructions.

7.3.3 Contractor And Government Entity Code (CAGE Code). (Formerly Federal Supply Codes for Manufacturer (FSCM)). The CAGE Code is a five-digit code applicable to all activities which have produced or are producing or supplying items used by the Federal Government. It also applies to Government activities which control design, or are responsible for the development of certain specifications, drawings or standards which control the design of items. These activities are assigned a CAGE Code from Cataloging Handbook H4/H8. If necessary, because of space limitations, the abbreviation phrase "CAGEC" may be used for the phrase CAGE Code. CAGE Code is obtained by the procedure outlined in DOD 4100.39-M Volume 7.

7.3.4 Suffix Identifiers (Formerly Dash Numbers). The suffix identifier is a numerical identification generally limited to three digits, suffixed to a drawing number to identify individual parts, assemblies or drawing types. Suffix identifiers may begin as a single digit (-1) or as triple digits (-001).

7.3.5 Detail. Any part that cannot be separated into two or more units without destruction of its design use. A detail may be delineated on a separate drawing or it's using assembly drawing.

7.3.6 Drawing Number. A non-significant number assigned each engineering drawing, along with CAGE Code and document title, providing item identification for associated lists and documents referenced thereon. The numbers consist of numeric, alpha or special characters, or combinations thereof. Spaces are not used in the number. The limitations of some systems require drawing number lengths not to exceed 15 characters, although some drawing number systems accept up to 32 characters.

7.3.7 Find (Item) Number. A find number may be assigned to an item (part, assembly, etc.) on the field of a drawing for purposes of cross-referencing to items on a parts list, and as locators in lieu of using the item identification. See PARAGRAPH 7.8. Item identifications for parts, assemblies, etc., that are identified by a find number shall be itemized in the integral or separate parts lists, or in a table on the drawing. Reference designations in accordance with IEEE STDS 200 and 315 may be used as "Find Numbers". See ASME Y14.34M. Find numbers are for cross-referencing purposes only and are not used for procurement, nor are they marked on the items.

7.3.8 Installation. An accumulation of parts delineated on a drawing which cannot perform a specific function separately. The parts must be assembled together relative to a supporting structure or associated parts to perform a specific function. An installation is not "stockable"; as such it is usually a bag or box of loose parts. It comes into being only after assembly into the supporting structure or with associated parts.

7.3.9 Installation Drawing. Drawings that show general configuration and complete information necessary to install a part(s) relative to its supporting structure or to associated part(s).

7.3.10 Item (Find) Number. An item number is a number assigned on an assembly drawing to a part, sub-assembly, etc., for the purpose of cross-referencing the callouts in the Parts List, and as locators in lieu of using the item part number. Item numbers are often referred to as "FIND" numbers and are used interchangeably. The parts, assemblies, etc., so marked have other identifying numbers for purposes of procurement and marking that are cross-referenced to the item/find numbers in integral or separate Parts Lists (PL).

7.3.11 Major Assembly. All of the necessary assemblies and details that are joined together and delineated on one drawing to form a major section of an end item such as a wing or the center section of a fuselage.

7.3.11.1 Limitation Of Descriptive Terms. The terms Detail, Subassembly, and Major Assembly are never used on drawings for part names or drawing titles.

7.3.12 Neutral Part. Any part for which an opposite part does not exist when created.

7.3.13 Part. Refers to any detail, assembly, subassembly or installation. Parts are defined on drawings as either shown parts, opposite parts, or neutral parts.

7.3.14 Part Or Identifying Number (PIN). Part Identifying Numbers consist of letters, numbers or combinations of letters and numbers, which may or may not be separated by dashes or slashes that are assigned to uniquely identify a specific item. The PIN shall be or shall include the design activity drawing number and may include a suffix identifier (formerly dash number) if applicable. See PARAGRAPH 7.8.3. The PIN does not include the drawing revision identifier, drawing size or activity identification. PIN number length limitation is 32 characters from a previous 15 limit.

7.3.15 Part Number. Part numbers are assigned to uniquely identify a specific item or part.

7.3.15.1 Part Number Callout. A firm part number callout is the citation of an item's P/N used to identify a specific part on drawings where the part is principally seen. Each part defined on a drawing for manufacture shall be identified by firm callout. When a specific part is used in more than one place on an assembly, a firm callout shall be made for each location except for specific part callouts showing multiple quantities, and shall be used in the following cases: See PARAGRAPH 10.7.1.

a. When specific parts are used in close proximity to each other.

b. When specific parts form an obvious pattern or group such as fasteners.

7.3.16 Procurement Specification. A company generated book form document other than a drawing that defines the technical requirements (design-to, performance, environmental, testing, reliability, maintainability, etc.) for equipment to be developed by a subcontractor.

7.3.17 Referenced Documents. All documents other than Government or non-Government specifications and standards referenced on drawings shall have a document identification number, and a CAGE Code. These numbers shall be placed in a conspicuous location on the document. See PARAGRAPH 7.6.4.

7.3.18 Reference Part Number Callout. A reference part number callout is used to indicate an item that is shown and called out elsewhere on the drawing only for informational purposes. Reference callouts shall be enclosed in parentheses "( )". Show the suffix identifier (dash) number for parts originating on other drawings only when clarity requires. See PARAGRAPH 7.8.12b.

7.3.19 Shown And Opposite (Parts). "Shown" applies to the part(s) as pictured. "Opposite" applies to the mirror-image of the "shown" part(s) and is normally not depicted on the drawing.

7.3.20 Subassembly. An assembly that is a component of another assembly and is created on its using assembly drawing or on a separate drawing by itself. Subassemblies shall be created for logical manufacturing processing and/or when two or more parts of an assembly create a logical subassembly for a spare unit.

7.3.21 Subcontractor Part. Parts that are fabricated to your design by manufacturers other than your company and identified by your numbering system.

7.3.22 Tabulated Part Number. Tabulating of variable features or characteristics precludes the preparation of separate drawings for each part by giving complete information for the manufacture of two (2) or more items which have similar configuration but vary in dimension, material, finish, etc.

7.3.23 Vendor Parts. Parts that are fabricated by manufacturers other than your own design and identified by vendor numbering system.

7.4 NEW DRAWINGS AND ASSOCIATED LISTS.

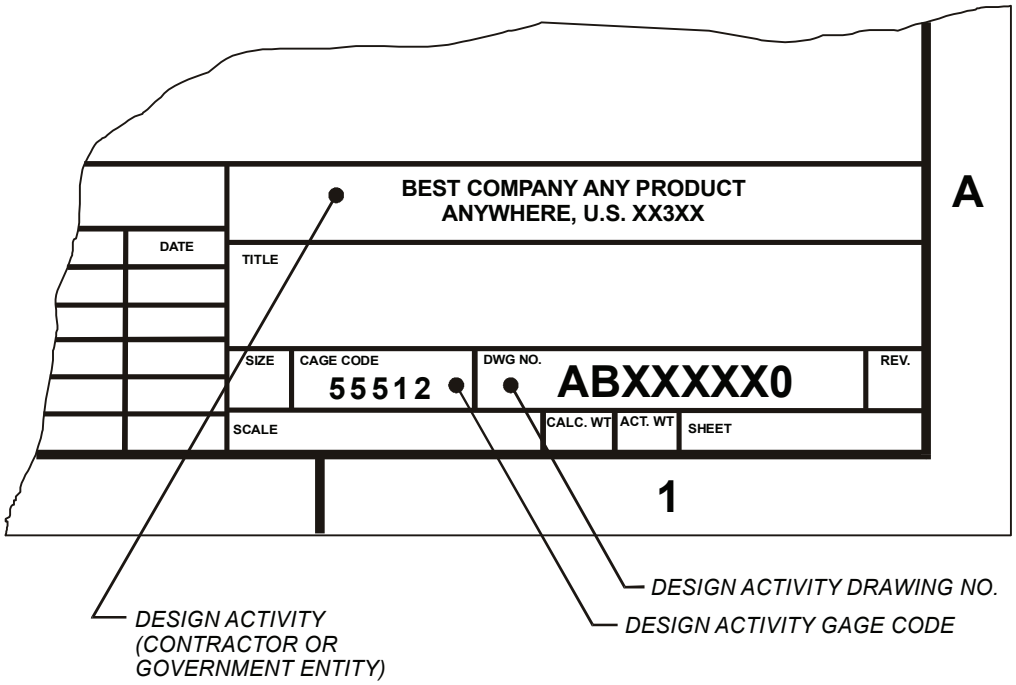
7.4.1 CAGE Code Assignment On New Drawings. New drawings and associated lists shall be assigned a CAGE Code in accordance with PARAGRAPHS 7.6, drawing number in accordance with 7.7, and part numbers in accordance with 7.8.

7.5 EXISTING DRAWINGS AND ASSOCIATED LISTS.

7.5.1 CAGE Code Assignment On Existing Drawings. Existing drawings and associated lists which do not contain a CAGE Code, or code identification shall be assigned a CAGE Code in accordance with PARAGRAPH 7.6 and placed as near as possible to the drawing or associated list number. The CAGE Code shall be preceded by the phrase “CAGE Code”.

7.6 CAGE CODE NUMBER ASSIGNMENT.

7.6.1 Contractor And Government Entity Code For Manufacturers. Unless otherwise specified, the CAGE Code shall always be the CAGE Code of the design activity whose drawing number is assigned to the drawing and shall be entered on the drawing in the appropriate block, as shown in FIGURE 7-1. CAGE Code assignment shall establish a relationship between the assigned code and the design activity name and address (appearing on the drawing) at the time of assignment.



EXAMPLE OF “CAGE CODE”, DRAWING NUMBER, AND DESIGN ACTIVITY AS THEY RELATE TO THE SAME CONTRACTOR OR GOVERNMENT ENTITY
FIGURE 7-1

7.6.2 CAGE Code Assignment Responsibility. The contractor design activity is responsible for assigning or obtaining document numbers and CAGE Codes for documents used with drawings. CAGE Code assignment is not required for specifications and standards listed in the ASSIST database or in a recognized non-Government Standardization document.

7.6.3 CAGE Code Number Position. CAGE Code precedes the part or identifying number and is not a part of the number. The CAGE Code, however, is a part of the item identification. See PARAGRAPH 7.6.5.

7.6.4 CAGE Code Location. CAGE Codes shall be entered in the appropriate block of the engineering drawing or associated list format and shall be preceded by the phrase “CAGE Code”. See SECTION 6.

7.6.5 CAGE Code Location For Calling Out Documents Of Other Design Activities. CAGE Code location of documents other than Government or non-Government specifications and standards (e.g., subcontractor design activity referenced on drawings) shall have a document identification number preceded by the CAGE Code. Their location on the drawing shall be conspicuous. When the CAGE Code is shown in the parts List, it may be omitted from the part callout on the face of the drawing.

e.g. XXXXX - AAYYYYYYYYY - 123

- 123 — SUFFIX IDENTIFIER (DASH) NO.
- AAYYYYYYYYY — SUBCONTRACTOR DOCUMENT NO.
- XXXXX — CAGE CODE OF SUBCONTRACTORS

OR:
TYPE A = PRIOR FSCM NO. ASSIGNMENT
TYPE E = EUROPEAN OR NATO NO.

BUT NOT:
TYPE F = Organizations which neither manufacture nor control design, such as dealers, agents or vendors of items produced by others, are assigned type "F" CAGE Codes and shall not be included as a design activity on a drawing.

7.6.6 Transfer Of CAGE Code Responsibility To Another Activity. This is a revision action and is covered in SECTION 23.

7.7 DRAWING NUMBER ASSIGNMENT.

7.7.1 Control Of Drawing Number Assignment. A centralized administrative activity should control drawing number assignment to ensure that numbers are not skipped or duplicated. When a design activity is large or dispersed, a block of numbers may be assigned to each local organization to ensure careful control. As a minimum, record the following information for each drawing number:

a. Drawing Title (at least the noun name).

b. Name of drafter.

c. Name (or code number) of project.

d. Date of drawing number assignment.

e. Date of drawing release.

7.7.2 Assigned Numbers Not Used. If a drawing is not used in the end product, mark it "Not Used" and send it to file; make a corresponding entry in the assignment record logbook. Do not reassign the number to another drawing.

7.7.3 Rules Governing Drawing Number Preparation (for Government and Defense-related Applications). The drawing number shall comply with the following:

a. 32 character maximum (15 character maximum on some systems) – correspondingly less if it must be prefixed andsuffixed to form a part number (See PARAGRAPH 7.8.3).

b. Characters may include Arabic numerals, uppercase letters and dashes, except, do not use the letters I, O, Q, S, X or Z.

c. Number shall be Arabic numerals. Fractional, decimal and roman numerals shall not be used.

d. The letters S and Z are permissible if they are part of an on-going system.

e. Do not use punctuation such as: (), *, /, o, +, or blank spaces.

f. Do not include the Federal Supply Code(FSC) for Commercial And Government Entry (CAGE) Code.

g. Do not include drawing format size letter.

h. Do not include drawing revision letter.

Example: DRAWING NUMBER ABXXXXXXX
Prefix (as applicable)
Drawing Number

i. Significant drawing numbers are acceptable (but not recommended) as long as they provide complete unique identification. Prefixes (other than those for associated lists) constitute a form of significant numbering.

e.g. ED = Envelope Drawing
PD = Piping Diagram
EL = Schematic Drawing
Note: “S” not permitted

j. For Associated List numbering, see SECTION 10.

7.8 PART OR IDENTIFYING NUMBER (PIN) ASSIGNMENT.

7.8.1 Determination For Part Or Identifying Number (PIN) Assignment (for Government and Defense-related Applications). Each item (e.g., detail part, assembly, etc.) shall include the drawing number indicated on the drawing on which the item is described, with the following limitations.

a. 32 character maximum (15 character maximum on some systems) for the PIN, including suffix identified (dash) number.

b. The suffix identifier (dash) number shall follow the same rules as the drawing number. See PARAGRAPH 7.7.3.

c. Suffix identifier (dash) numbers may be used even if only one item (part) is described on the drawing.

d. A PIN shall not include drawing revision.

e. Once assigned, a PIN shall not be changed except as permitted or required byPARAGRAPH 7.8.3.2.

f. An item covered by an approved standard and used without alteration or selection shall be identified by the standard PIN (e.g., Military Specification Sheet number or non-Government standard PIN).

EXAMPLE:
MIL-S-1234/16 (Military part number)
AS3456-4 (Non-Government (SAE) part number)

g. An item covered by an approved Government specification containing a part identification system and used without alteration shall be identified by that specification part identification.

EXAMPLE: M38510/27001BYA

h. All other items shall be identified by an item identification (PIN and CAGE Code) on a drawing.

i. Items referenced in subparagraphs "f" and "g" above, which are altered or selected, shall be identified by a new drawing and PIN of the using design activity requiring the alteration or selection.

j. Items referenced in subparagraph "h" above, which are commercially available as being screened and tested for military application, shall be identified as a Vendor Item Control Drawing (VICD) (previously called Specification Control Drawing (SCD)) or a Source Control Drawing (SOCD) with new drawings and PINs assigned by the using design activity which requires control over the items purchased for use in their finished product. (See VICD and SOCD in SECTION 4 for PIN number identification procedures for each).

k. An administrative control PIN may be assigned to items whose current PIN exceeds 15 characters and does not meet the requirements of 32 character PIN number limitation, provided the design activity has no control of the assignment of the current PIN. The administrative PIN for the item must meet the same identification requirements of vendor control items. This applies to items controlled by Government and non-Government standardization documents. The control shall be used for administrative purposes only and reflect an actual identification cross reference drawing or data base entry.

l. PIN numbers which require reference to another document for additional information or support, including identifications for class, type, level, etc, which would exceed fifteen characters, an administrative control PIN may be assigned for an actual identification cross reference drawing or data base entry.

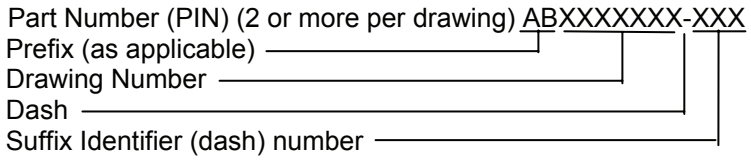
EXAMPLE:

RNC55H1001FS per MIL-R-55182/1 (would become a PIN of the Activity not to exceed fifteen (15) characters).

7.8.2 Mono Part Drawing. Each part (PIN) number shall be or shall include the complete drawing number of the drawing which describes and controls the item.

7.8.3 Multiple Part Drawing. Where more than one item is described on a drawing, differentiate among them by assigning each item a unique dash number, suffixed to the drawing number. See FIGURE 7-2. Suffix PINs shall not be used on "Separable Assembly Drawings".

Example:



7.8.3.1 Multiple Suffix Identifier (Dash) Number For, And On, The Same Drawing. The complete part number shall be shown on drawings and lists; however, on drawings or lists bearing the same drawing number, the suffix identifier (dash) number only need be shown and the basic number need not be repeated.
e.g.


-015
(SUFFIX IDENTIFIER (DASH) NUMBER OF DRAWING)

7.8.3.2 Re-Identification of PIN Limitation. Items already identified by a PIN shall not be reidentified with a suffix identifier (dash) number. When a drawing is changed to incorporate additional items, PINs of existing items shall not be reidentified. See SECTION 23, PARAGRAPH 23.21.2 for permissible change to a PIN.

7.8.4 Number Of Characters Limitation. The body of ASME Y14.100 and Appendix D of ASME Y14.100 limit the Part Identifying Number (PIN) to thirty-two (32) characters; these limits include the prefix and suffix identifier (dash) number.

7.8.5 Character Selection Restrictions. The characters used to compose a suffix identifier (dash) number are subject to the same restrictions as a drawing number. See PARAGRAPHS 7.7.3b and 3c.

Note: Requirements “a” through “i” of PARAGRAPH 7.7.3 apply to part numbers assigned by a design activity; unfortunately, government and industry standardizing activities do not always follow these rules. The listing of their part numbers are covered under Parts Lists. See SECTION 10.

7.8.6 Use Of Suffix Identifier (Dash) Numbers On Drawings With Parts/Items. Suffix identifier (dash) numbers (-3,-5,-003,-005 etc.) may be used on the following types of drawings:

a. Multi-Detail Drawings.
b. Tabulated Detail Drawings.
c. Detail Assembly Drawings.
d. Tabulated Assembly Drawings.
e. Inseparable Assembly Drawings.

7.8.7 Restricted Use Of Part Numbers. Drawings that do not define a Part/Item shall not use Part numbers, but will use drawing numbers. The following examples apply:

a. Schematics (Electrical/Mechanical)
b. Wiring Diagrams
c. Logic Diagrams
d. Interface Drawings
e. Camouflage Drawings
f. Installation Drawings
g. Elevation Drawings
h. Connection Drawings
i. Printed Wiring Master Pattern

7.8.8 Suffix Identifier (Dash) Number Assignment. Assign suffix identifier (dash) numbers in consecutive order with -3 or -003 assigned to the detailed part. See FIGURE 7-2.

Note: On a tabulated drawing, it may be convenient to assign part suffixes in a significant pattern. e.g., on a drawing of a family of instrument gears: “PART SUFFIX INDICATES THE NUMBER OF TEETH, -13 (13 TEETH) THROUGH -288 (288 TEETH). This assignment can prevent extensive tabulation and confusion as to which gear has which suffix.

7.8.9 Shown And Opposite Parts. Indicate shown and opposite parts by suffixes in the field of the drawing.

7.8.9.1 Detail Of Only One Of The Parts. When only one part is detailed by a view designation, the view shall be identified by a suffix identifier (dash) number. The use of odd suffix identifier (dash) numbers for the parts shown and even suffix identifier (dash) numbers for opposite parts is preferred.

EXAMPLE:

VIEW A		**VIEW A**
-3 SHOWN	*OR*	1234567-1 SHOWN
-4 OPPOSITE		1234567-2 OPPOSITE

7.8.9.2 Detail Of Each Part In A Separate View. When each part is detailed by a separate view designation, each view is identified separately and a suffix identifier (dash) number assigned to each. Do not specify "SHOWN" and "OPPOSITE". The use of odd and even suffix identifier (dash) numbers preference still applies.

EXAMPLE:

VIEW A	**VIEW B**
-3	**-4**

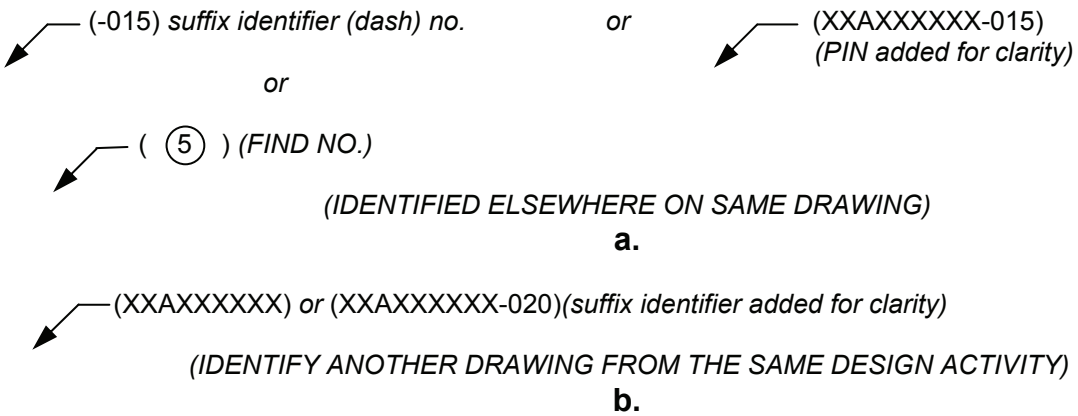
7.8.9.3 CAD Prepared Symmetrically Opposite Parts Drawings. Separate drawings shall be prepared for symmetrically opposite parts or described by separate individual views on the same drawing with each view identified by the appropriate -1 and -2 (odd-shown; even-opposite) number system. Do not specify “SHOWN” and “OPPOSITE” on CAD prepared drawings.

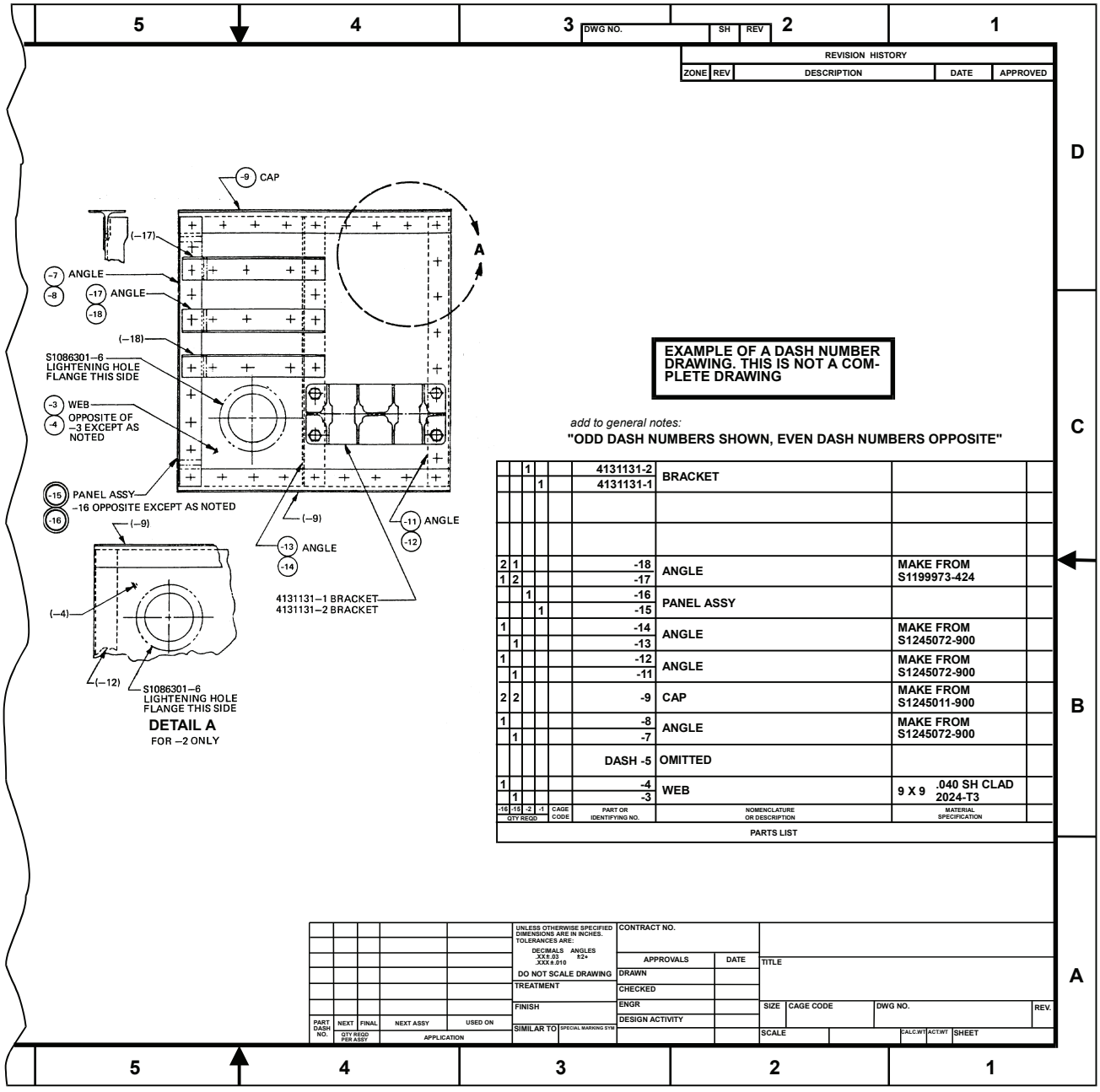
7.8.10 Title Block Location Of Shown & Opposite Suffix Identifier (Dash) Numbers. Shown and Opposite part suffix identifier (dash) numbers are entered above and to the left of the title block. See FIGURE 7-2.

7.8.11 Use Of Separate Drawings For Shown And Opposite Parts. If the variation or difference between parts is not clear, prepare a separate drawing.

7.8.12 Use Of Reference Part Number Callout. When a Part Number Callout is used on a drawing and is shown elsewhere again on the drawing for additional informational purposes or multiple applications, a Reference Part Number, Suffix Identifier (Dash) Number, or Find Number is used. See EXAMPLE **a**. Reference callouts shall be enclosed in parentheses “()”. Show the suffix identifier (dash) number for parts originating on other drawings only when clarity requires. See EXAMPLE **b**.

EXAMPLE:





SUFFIX IDENTIFIED (DASHED) NUMBERED DRAWING
FIGURE 7-2

7.8.13 Identification Of Parts Without Part Or Identifying Numbers (PINs). Many commercial parts or materials are identifiable only by a description. Such parts or materials without part numbers may be called out on a drawing by description only when they are not of the prime contractor design and are used without alteration or selection. (See also definition for "bulk materials").

EXAMPLE:

.250-20 UNC-2A SOCKET HEAD CAP SCREW, CRES STL, 1.00 LONG.

7.9 SUFFIX IDENTIFIER (DASH) NUMBER IDENTIFICATION.

7.9.1 Suffix Identifier (Dash) Numbers For Shown And Opposite Parts. Identify shown parts by odd suffix identifier (dash) numbers and opposite parts by even suffix identifier (dash) numbers. Suffix identifier (dash) numbers for shown and opposite parts that are delineated by the same picture shall be assigned consecutive numbers.

EXAMPLE:

-3 for shown part, -4 for opposite part.

7.9.1.1 Add To General Note On Drawings With Shown and Opposite Parts. Show the following note on drawings delineating shown and opposite parts:

X. ODD SUFFIX IDENTIFIER (DASH) NUMBERS SHOWN.
EVEN SUFFIX IDENTIFIER (DASH) NUMBERS OPPOSITE.

7.9.1.2 Exception To Paragraph 7.9.1.1. Add the phrase "EXCEPT AS SHOWN" when there is an exception to the foregoing note.

7.9.1.3 Rules Governing Suffix Identifier (Dash) Numbers. Suffix identifier (dash) numbers, whether odd or even, do not locate parts with respect to a finished product (e.g. on one side of the centerline of the product).

7.9.1.4 Application Of Odd And Even Suffix Identifier (Dash) Numbers. Whenever possible, call out odd suffix identifier (dash) numbered details or subassemblies on odd suffix identifier (dash) numbered assemblies and even suffix identifier (dash) numbered details or subassemblies on even suffix identifier (dash) numbered assemblies.

7.9.1.5 Exception To Rules Of Odd And Even Suffix Identifier (Dash) Numbers. When a shown part is delineated and identified by an odd numbered suffix identifier (dash) number but actual usage is opposite, use a specific note such as:

"MAKE OPPOSITE AND APPLY TO -XX2 APPLICATION ONLY".

7.9.2 Suffix Identifier (Dash) Numbers For Neutral Parts.

7.9.2.1 Identification Of Neutral Parts. Identify all neutral parts by odd suffix identifier (dash) numbers wherever possible.

7.9.3 Suffix Identifier (Dash) Numbers For Main Assemblies And Installations.

7.9.3.1 Identification Of First Part Or Assembly On A Drawing. On each drawing, identify the first main neutral or shown assembly or installation created on the drawing as -1.

7.9.3.2 Identification Of Additional Parts Or Assemblies On A Drawing. Identify other main assemblies or installations created on the drawing by the next consecutive odd or even suffix identifier (dash) number, except for suffix identifier (dash) numbers for shown and opposite parts or assemblies which must be assigned consecutive numbers.

EXAMPLE: -3 for the shown part or assembly and -4 for the opposite part.

7.9.3.3 Restricted Use Of Assemblies On A Drawing. Assemblies shall not be created on installation drawings

7.9.4 Identification Of Suffix Identifier (Dash) Numbers For Parts And Subassemblies. Identify the first part created on a monodetail drawing and the first detail or subassembly created on an assembly or assembly installation drawing as the next available "ODD" number. See FIGURE 7-2 and suffix identifier (dash) numbered part and subassemblies -1, -3, -15, -16.

7.9.4.1 Identification Of Additional Parts And Subassemblies. Identify additional parts and subassemblies created on the same drawing by the next consecutive odd suffix identifier (dash) number for shown parts or even suffix identifier (dash) number for opposite parts.

7.9.4.2 Suffix Identifier (Dash) Numbered Part And Subassemblies Used On Other Assemblies. Suffix identifier (dash) numbered parts and subassemblies created on assembly or assembly installation drawings shall be used as identified on the creating drawing when they are used later on a different assembly or installation drawing. Do not redraw or assign new part numbers when a part has a new usage. On the creating drawing, using an Integral Parts List, identify the detail part or subassembly by the creating drawing part number and suffix identifier (dash) number and flag the PL entry of the detail part and NA block to a General Note as follows:

X. ALL PARTS FLAGGED TO THIS NOTE ARE USED ON (XXXXXXX).

ENTER NEXT ASSEMBLY (NA) DWG NO.

7.9.5 Omission Of Suffix Identifier (Dash) Numbers.

7.9.5.1 Identification Of Omitted Suffix Identifier (Dash) Numbers. If suffix identifier (dash) numbers are inadvertently omitted, indicate the omission by the following drawing note in the Parts List. See FIGURE 7-2.

SUFFIX IDENTIFIER (DASH) NUMBER OMITTED:
(List omitted suffix identifier (dash) numbers)

7.9.5.2 Restricted Use Of Omitted Suffix Identifier (Dash) Numbers. Omitted suffix identifier (dash) numbers shall not be used to identify parts added by later changes.

7.9.6 Suffix Identifier (Dash) Numbers For Matched Parts.

7.9.6.1 Matched Parts Are Treated As Inseparable. Matched parts are separate parts which are machine-matched or otherwise precision-matched so that each pair or set must be installed as a unit. When furnished as spares, the separate components of each set are never interchangeable, although the set may be interchangeable as a unit. For example, split bearings and split guides are generally fabricated as matched parts. See FIGURE 7-3.

7.9.6.2 Matched Parts Are Each Identified As Part Of The Set. Show the machining operations which create the match condition on one drawing and assign each part of the set or pair an odd suffix identifier (dash) number from the drawing. (Even number (opposite) not appropriate.)

7.9.6.3 Identification Of The Matched Parts As A Set. Identify each set or pair of matched parts by an assembly part number and each detail by an odd suffix identifier (dash) number from the assembly drawings.

7.9.6.4 Identification Marking Of Matched Parts. When there is a surface suitable or sufficient for marking, mark the mating parts so that each part can readily be identified as to the pair or set to which it belongs. Precautions relative to steel stamping in critical areas shall apply to match number markings.

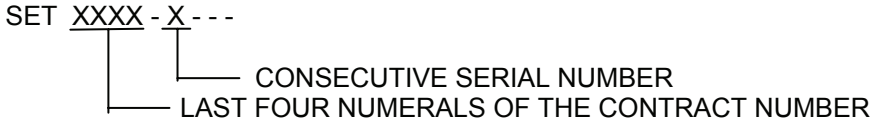
7.9.6.5 Identification Of Matched Parts On Field Of Drawing. Specify the match number bubble callouts in the field of the drawing. See FIGURE 7-3.

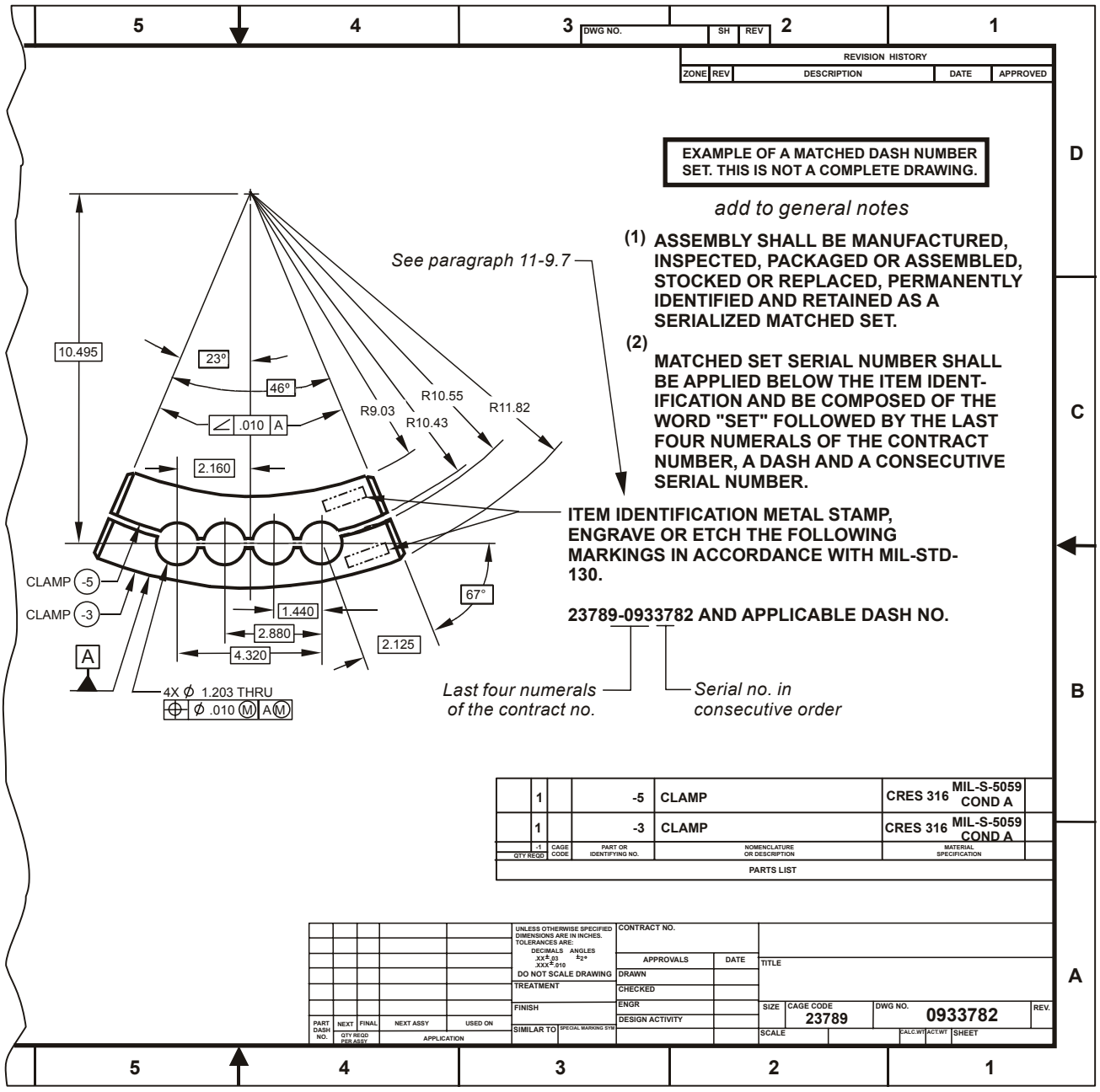
7.9.6.6. Identification Of Matched Parts In General Notes Column. The following notes shall be placed in the General Notes column. See FIGURE 7-3.

(1) ASSEMBLY SHALL BE MANUFACTURED, INSPECTED, PACKAGED OR ASSEMBLED, STOCKED OR REPLACED, PERMANENTLY IDENTIFIED AND RETAINED AS A SERIALIZED MATCHED SET.

(2) MATCHED SET SERIAL NUMBER SHALL BE APPLIED BELOW THE ITEM IDENTIFICATION AND BE COMPOSED OF THE WORD 'SET' FOLLOWED BY THE LAST FOUR NUMERALS OF THE CONTRACT NUMBER, A DASH AND A CONSECUTIVE SERIAL NUMBER.

EXAMPLE:





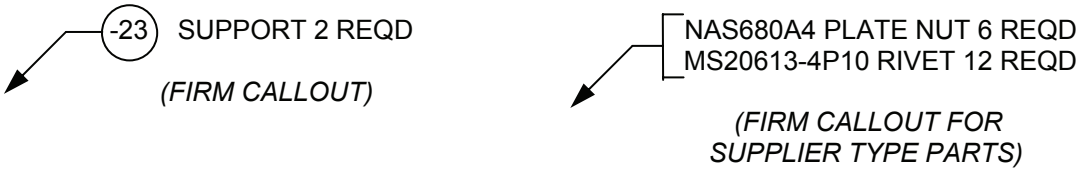
MATCHED SUFFIX IDENTIFIER (DASH) NUMBER SET
FIGURE 7-3

7.10 FIELD OF DRAWING CALLOUTS.

7.10.1 Specified Quantities For Callouts.

7.10.1.1 Designation Of Callout Quantities. Specifying quantities adjacent to find number callouts (item bubbles) on the field of the drawing as shown in FIGURE 7-4 is optional. It is not necessary to show the quantity if the callout applies to a single part. Callouts that pertain to more than one part shall specify the quantity to which the callout applies when using this method.

7.10.1.2 Application Of REQD. Quantities shown shall be followed by the abbreviation REQD. See FIGURE 7-4.

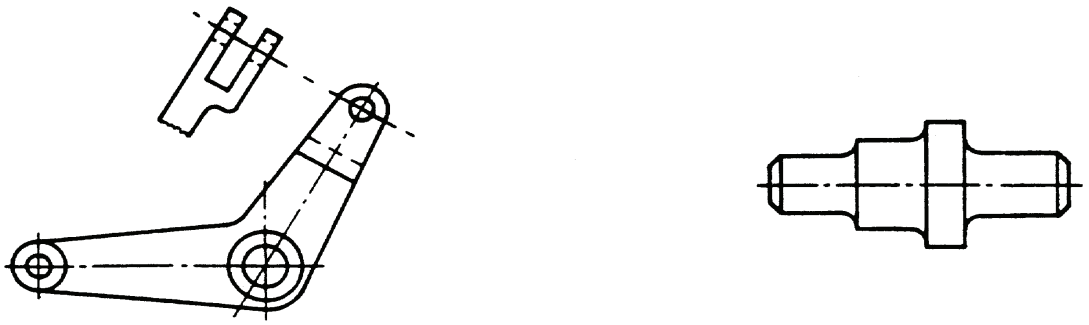


QUANTITIES REQD CALLOUTS
FIGURE 7-4

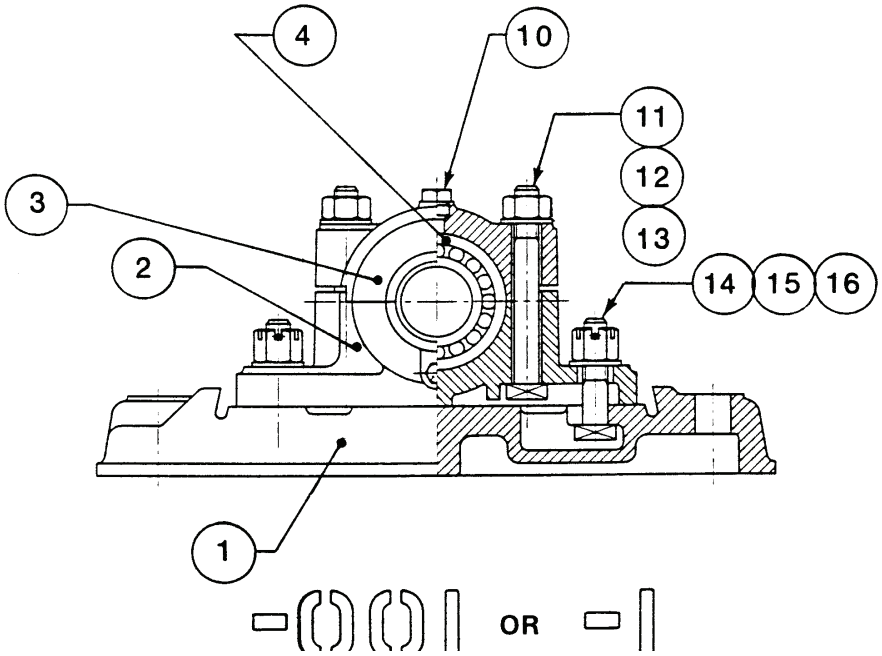
7.10.1.3 Use Of Quantity Restriction. Do not show quantity with reference callout.

7.10.2 Identification For Two Or More Details Created On A Multi-Detail Drawing Or Two Or More Assemblies Created On An Assembly Drawing.

7.10.2.1 Identification Of Parts Or Assemblies. Identify parts or assemblies by placing suffix identifier (dash) numbers beneath the views. Use bold type letters .24 (6mm) high for detail suffix identifier (dash) numbers and .24 (6mm) high for assembly suffix identifier (dash) numbers. See FIGURES 7-5a and 7-5b.



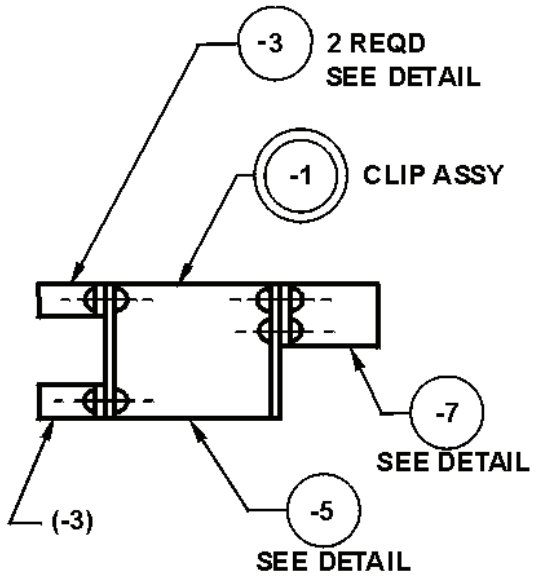
DETAILS
FIGURE 7-5a



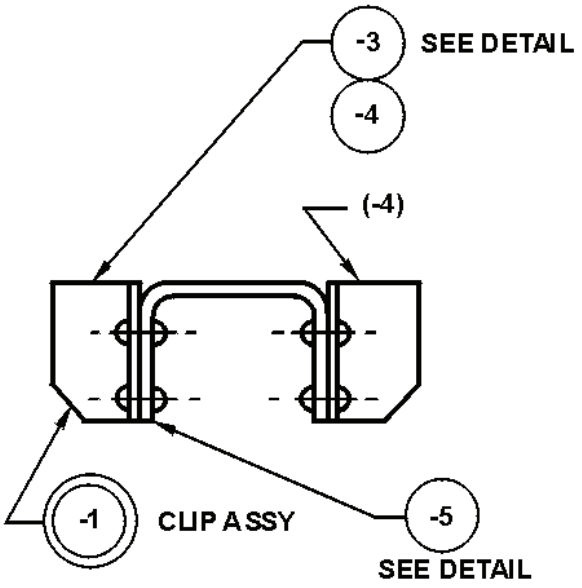
NOTE: PARTS ARE IDENTIFIED BY ITEM/FIND NUMBERS IN THIS EXAMPLE (See PARAGRAPHS 7.3.10,7.8.12 and 7.11)

ASSEMBLY
FIGURE 7-5b

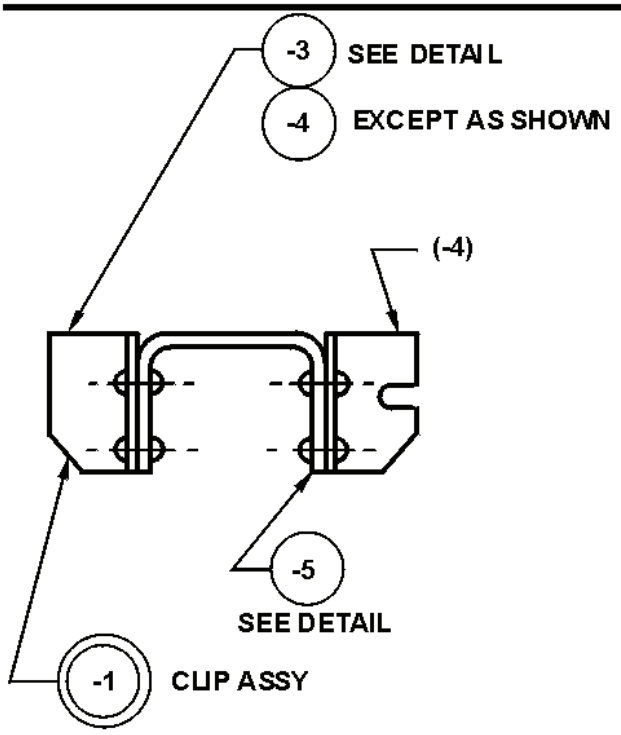
7.10.3 Firm Callouts Of Suffix Identifier (Dash) Numbered Details And Subassemblies. Identify detail and subassembly by firm suffix identifier (dash) numbers and names where the parts are created on their using drawing. Enclose detail suffix identifier (dash) numbers in a single .50 (12.7mm) DIA bubble and subassembly suffix identifier (dash) numbers in .60 (15.2mm) DIA double bubble using .16 (4.1mm) high letters. See FIGURES 7-6 thru 7-9.



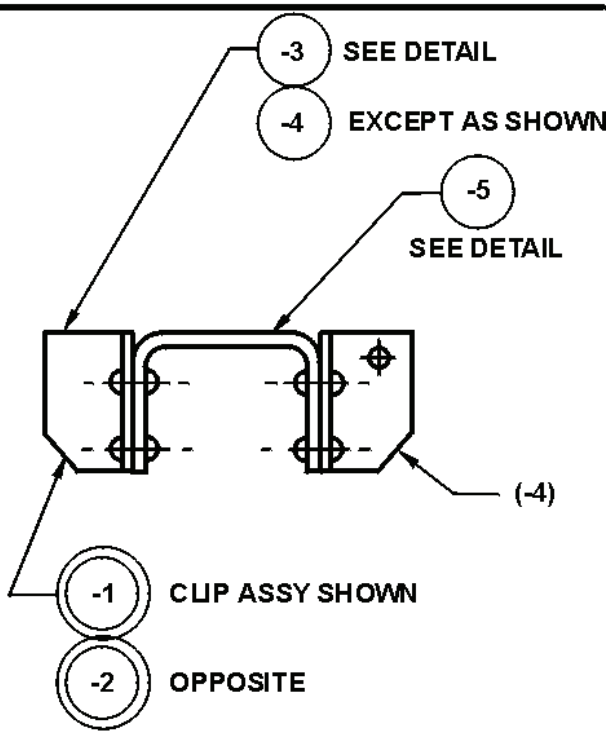
DETAIL SUFFIX IDENTIFIER (DASH) NUMBER
FIGURE 7-6
(Neutral Assembly)



SHOWN AND OPPOSITE DETAIL
SUFFIX IDENTIFIER (DASH) NUMBER
FIGURE 7-7
(Neutral Assembly With Shown And Opposite Detail Parts)



SHOWN AND OPPOSITE DETAIL SUFFIX IDENTIFIER
(DASH) NUMBER WITH MINOR VARIATION
FIGURE 7-8
(Neutral Assembly)



SHOWN AND OPPOSITE ASSEMBLY
FIGURE 7-9
(-1 Assembly Shown, -2 Assembly NOT Shown)

7.11 ITEM/FIND NUMBER.

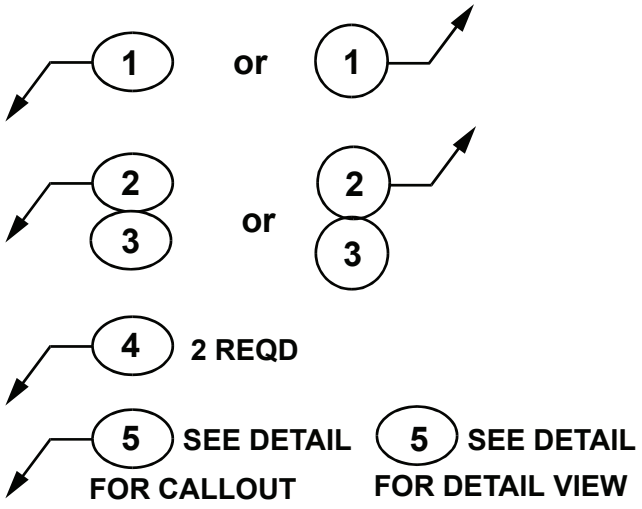
7.11.1 Item/Find Number Assignment. Item Numbers may be assigned to an item (part, assembly, etc.) which are entered in the Item Number Column and on the field of assembly drawings only. Their purpose is for cross-referencing to items on a parts list and as locators in lieu of using the item part number. They shall be in numerically ascending order beginning with "1". No item number may be omitted or removed by a subsequent change to the drawing. (See SECTION 10.)

7.11.2 Cross-Reference Of Item/Find Number Limitation. For cross-referencing items to other documents, the part number is used. For parts defined on other drawings, use the part numbering system of that drawing. See PARAGRAPH 7.3.18.

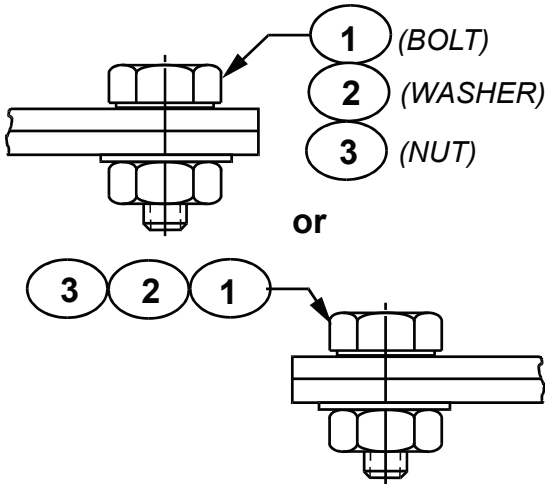
7.11.3 Item/Find Number Identification On Field Of Drawing. Items are identified on the field of an assembly drawing either by the complete part number or the parts list item number. Only one method is used on the field of a given assembly drawing.

7.11.4 Item/Find Numbers Are Enclosed In Ellipse Or Bubble. Item numbers may appear on the field of the drawing enclosed in approximately one-half inch, 45° ellipse or bubble (ellipse is used to distinguish item/find callouts from dash number callouts). A leader line points to the applicable part. See FIGURE 7-10.

7.11.5 Sequence Of Item/Find Numbers. It is preferred to group item numbers in numerical sequence or order of assembly. See FIGURE 7-11.

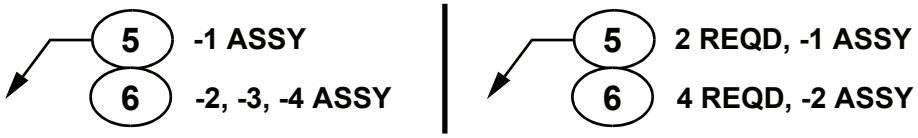


ITEM NUMBER ON FIELD
OF DRAWING
FIGURE 7-10



ITEM NUMBER IN SEQUENCE
OF ASSEMBLY
FIGURE 7-11

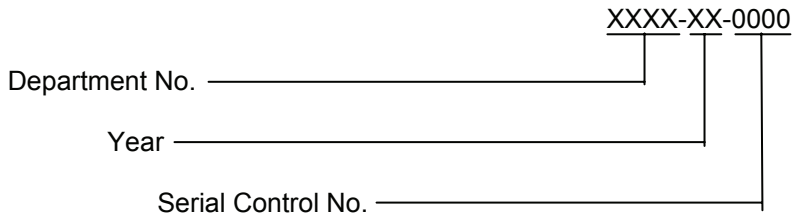
7.11.6 Item/Find Number Callouts With Different Assembly Applications. On multiple assembly drawings, any item number callout not applicable to all assemblies may specify the applicable assemblies. See FIGURE 7-12.



ITEM NUMBERS ON MULTIPLE ASSEMBLY DRAWING
FIGURE 7-12

7.12 NUMBERING OF CHARTS, GRAPHS AND OTHER DATA.

7.12.1 Numbering System. The numbering system for identifying and recording departmental charts, graphs, study notes and data, other than Company product drawings and associated special equipment (tooling, etc.), is as follows:



7.12.2 Control Responsibility. A Division may designate that either a control center or each department be responsible for maintaining a log of serial control number assignments. Only one standardized method will apply at any one division. Each year the serial control number will start with the number 0001.

7.12.3 Numbering System Restriction. This numbering system is not to be used to identify hardware or company format drawings.

NOTES: