MIL-M-008910A(AS)
7 February 1968
USED IN LIEU OF:
MIL-M-8910
21 July 1961

MILITARY SPECIFICATION

MANUALS, TECHNICAL, ILLUSTRATED PARTS BREAKDOWN, PREPARATION OF

This limited coordination Military specification has been prepared by the Naval Air Systems Command based upon currently available technical information, but it has not been approved for promulgation as a coordinated revision of Military Specification MIL-M-8910. It is subject to modification. However, pending its promulgation as a coordinated Military specification, it may be used in procurement.

1 SCOPE

1.1 This specification covers the requirements for the preparation of Illustrated Parts Breakdown technical manuals.

2 APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on the date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein:

SPECIFICATIONS

Military

MIL-M-5474	Manuals, Technical, General Preparation of

STANDARDS

Military

MIL-STD-12	Abbreviations for Use on Drawings and in Technical Type Publications.

PUBLICATIONS

Military

Department of Defense

H4-1 and H4-2	Cataloging Handbook, Federal Supply Code for Manufacturers
DD-441 (Attachment)	Industrial Security Manual for Safeguarding Classified Information

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3 REQUIREMENTS

3.1 **Manner and form of preparation.**—The Illustrated Parts Breakdown shall be prepared in accordance with the format of figures 1 through 25, except as modified herein. It shall be prepared in the form (reproducible copy, negatives, printed copies, etc)specified in the contract. Except as specifically provided herein, the preparation of reproducible copy shall be in accordance with MIL-M-5474. Reproducible copy prepared by electric accounting machine (EAM) is acceptable provided such copy conforms to the applicable requirements of MIL-M-5474 for preparation, correction, mechanical assembly, and reproducibility. Large Illustrated Parts Breakdowns for major end articles, such as missiles or aircraft, may be prepared in a series of separate volumes, each covering a functional system or major component of the end article; for example: VOL 1 Numerical Index, VOL 2 Structure, VOL 3 Power Plant and Fuel System, VOL 4 Hydraulic and Pneumatic Power Systems, VOL 5 Electronic System, etc. The contractor shall submit a proposed volume organization to the procuring activity for approval before proceeding.

3.1.1 Changes and revisions.—Changes and revisions to the Illustrated Parts Breakdown shall be

furnished as required by the contract, to reflect changes, additions, and deletions, including the effect of in-service equipment changes and modifications and the effect of changes in maintenance concepts. Changes and revisions shall be prepared in accordance with MIL-M-5474.

3.1.2 Page and paragraph numbering.—Paragraphs of the Introduction and all pages of the Illustrated Parts Breakdown shall be numbered in accordance with MIL-M-5474.

3.2 Arrangement.—The Illustrated Parts Breakdown shall be arranged in the following manner, as applicable:

Table of Contents

Section I — Introduction

Section II — Group Assembly Parts List

Section III — Numerical Index

Section IV — Reference Designation Index

3.3 Table of Contents.—The Table of Contents shall be double column, single spaced. When applicable, lists of illustrations and tables shall also use double column format. A Table of Contents is not required when the Group Assembly Parts List (text and illustrations) is 16 pages or less in length. The Table of Contents shall list:

a. The first page number of the Introduction.

b. The title and page number of each illustration in the Group Assembly Parts List.

(1) For articles containing many components and assemblies, illustration listings may be grouped. Such groupings shall be titled, and the titles of the illustrations within the groups shall be indented. If preferred, listings may be arranged without indention in alphabetical sequence by the principal noun of the title; page numbers, accordingly, will not be in sequence.

c. The first page number of the Numerical Index.

d. The first page number of the Reference Designation Index (when applicable).

e. Appropriate Government type designators (in alpha-numerical sequence); for example, C1607/ARC52, MT1477/ARC52, RT332/ARC52, followed by applicable nomenclature and Group Assembly parts list page number.

NOTE: This requirement is applicable only to electronic equipment manuals containing many components to which designators have been assigned. This type designator list shall form the last part of the Table of Contents.

3.3.1 Multi-volume manuals.—In multi-volume Illustrated Parts Breakdowns, each volume shall contain a Table of Contents for the volume. It shall include the applicable items specified in 3.3.

3.4 Section I—Introduction.—The Introduction to the Illustrated Parts Breakdown shall contain the following information:

a. Explanation of the models, marks and modifications (MK and MOD), dash numbers, series, or blocks of the article covered by the Breakdown. When the Breakdown covers articles for more than one Service and each Service has its own type, model, and serial numbers, complete identifying information on the articles for each Service shall be included.

b. A list of Government approved equipment service changes or technical directives, the parts information of which has been incorporated into the Illustrated Parts Breakdown.

c. Explanation of the Usable On Codes employed in the Breakdown. It shall also be explained that the absence of a code in the Usable On Code column indicates that the parts so shown are usable as replacements on all models covered by the manual. Where both space saving and greater convenience for the user will result, Usable On Code explanations may be given at the bottom of applicable pages throughout the Breakdown instead of in a master code explanation in the Introduction.

d. A statement indicating that definitions and explanation of source, recoverability/accountability and kit codes used in the numerical index of the manual are contained in BUWEPS INSTRUCTION 4423.2.

e. A reference to Cataloging Handbook H4-1 and H4-2, Federal Supply Code for manufacturers, for names, addresses, and codes of all manufacturers supplying items or arti-

cles not carried under the prime contractor's part numbers.

f. Explanation of all symbols and abbreviations used in the various sections of the Breakdown.

g. In Illustrated Parts Breakdowns in which the Group Assembly Parts List consists of more than 16 pages, an explanation of all cross-index systems employed, including an illustration showing (figures 1 and 2).

(1) how to find the part number or description by use of the Table of Contents and illustration.

(2) how to find the illustration or description of an item when its part number or reference designation is known.

h. When spares and/or repair parts for the article or for any repairable units within the article are to be supplied in the form of kits, an explanation shall be given of the fact that kits are listed, similar to the following:

"This manual reflects the listing of repair parts kits. Certain replacement parts are stocked only in kits. Standard parts and parts having multi-application are stocked in their appropriate classes and may also be stocked in kits. Kit parts should not be ordered from separate stock to make up a kit." (Refer to 3.5.1.5.3.)

3.4.1 Multi-volume manuals.—In multi-volume Illustrated Parts Breakdowns, only the first volume, Numerical Index (Numerical and Reference Designation Index, if applicable) shall contain an Introduction. This shall be a complete introduction for all volumes. The Tables of Contents for all other volumes shall state, "Introduction - - - -See first volume, Numerical Index (Numerical and Reference Designation Index, if applicable)."

3.4.1.1 The first paragraph for each Group Assembly Parts List volume shall contain Usable On Code information required by 3.4c.

3.5 **Section II—Group Assembly Parts List.**— The Group Assembly Parts List is a breakdown of all systems, assemblies, and subassemblies which can be disassembled, reassembled, or replaced and are contained in the end article, together with related special support equipment as outlined in 3.5.1.1.

3.5.1 Group Assembly Parts List contents.—The Group Assembly Parts List shall consist of illustrations and columnar listings of parts. Parts shall be listed in order of disassembly sequence, except that this may be modified where sequence of disassembly cannot be maintained. The manner and form of preparation shall be as specified herein. (See also figures 3 through 23.) The Group Assembly Parts List shall be divided into representative main groups, assemblies, or systems with such additions, omissions, or changes as may be required by the specific article. The first page of the main groups, assemblies, or systems shall carry the section number and appropriate titles at the top of the page. The remainder of this page shall contain text or illustrations(s), as applicable. Illustrations used shall provide a good view of the main group, assemblies, or systems; its composition, and relationship to the end article. When possible, the selection of main groups or systems shall be compatible with applicable maintenance manuals. The first illustration of the Group Assembly Parts List shall be an exploded or assembled view of the article to serve as a visual index to the group breakdown of the article. (See figures 3 through 9.) This view shall be keyed to permit reference to main group, assembly, or system illustrations, as applicable.

Examples of main groups, assemblies, or systems:

Electronics
1. Central Air Data Computer
2. True Mach Unit
3. True Altitude Unit
4. Temperature Sensor
5. True Air Speed and Ground Speed Indicator
6. Airstream Direction Transducer
7. Barometric and Radar Altitude Indicator
8. Air Speed and Mach Number Indicator
9. Special Support Equipment

Airframe (arranged by systems)
1. Power Plant and Fuel
2. Flight Control Systems
3. Hydraulic Systems
4. Electrical and Electronic Equipment
5. Cockpit Furnishings
6. Armament
7. Structure
8. Special Support Equipment

Ordnance
1. Guide Assembly
2. Carriage Assembly
3. Stand Assembly
4. Slip Ring Assembly
5. Train and Elevation Power Drive Assemblies

Real Property Installed Equipment
1. Air Heater Assembly
2. Plumbing Installation
3. Moisture Content Measurement System
4. Remote Control and Measurement Facility
5. Safety Glass Installation
6. Instrumentation Bulkhead
7. Refrigeration Unit Facilities
8. Control and Measurement Cables
9. Junction Box
10. Terminal Box

Power Plant
1. Power Section
2. Compressor
3. Accessory Drive
4. Turbine
5. Fuel System
6. Electrical System
7. Control System
8. Torquemeter
9. Reduction Gear
10. Special Support Equipment

Airframe (alternate, arranged by group)
1. Forward Section Fuselage
2. Aft Section Fuselage
3. Empennage
4. Left-Hand Wing
5. Right-Hand Wing
6. Center Wing Cover
7. Power Plant
8. Left-Hand Booster
9. Right-Hand Booster
10. Left-Hand Fuel Pylon
11. Right-Hand Fuel Pylon
12. Special Support Equipment

Accessory
1. Generator Control Section
2. Bleed Duct Section
3. Enclosure and Hourmeter Section
4. Fuel and Air Section
5. Oil and Vent Section
6. Electrical Section
7. Accessory Section
8. Turbine Section
9. Compressor Section
10. Special Support Equipment

3.5.1.1 Special support equipment.—Except as noted in 3.5.1.1.1, all Government approved special support equipment (refer to definition, 6.2.8) shall be listed in Section II, Group Assembly Parts List, and be treated as one main group. The special support equipment main group shall be arranged in categories, such as special and nonstandard tools, ground handling equipment, and test equipment, with the same group headings as the Group Assembly Parts List for the system to which it applies, and shall include the special support equipment which is being furnished for the named system, assembly, etc. When the procuring activity has procured a separate Illustrated Parts Breakdown for an item of special support equipment, or has indicated that one will be procured, only the item proper shall be listed, along with reference to the identifying number of the separate Illustrated Parts Breakdown. Otherwise, a complete breakdown shall be provided for each repairable item of special support equipment.

3.5.1.1.1 When special support equipment is procured only for depot maintenance of a contractor-furnished equipment item installed in the end article, and a separate Illustrated Parts Breakdown will be issued for that item, such depot-level special support equipment shall not be included in the end-article manual but shall be included in the manual on the installed item. In addition, the manual on the installed item shall not include special support equipment procured only for use at organizational and intermediate maintenance levels.

3.5.1.2 Running heads.—The running head on each page of the Group Assembly Parts List may show the name of the main group, assembly, or system of which the page is a part, in lieu of the title "Group Assembly Parts List" as prescribed by MIL-M-5474. (See figure 13.)

3.5.1.3 Indention to show relationship.—The Group Assembly Parts List shall be indented or coded to indicate item relationship. Actual indented lists are preferred. Use of coded indention requires procuring activity approval.

Examples:

ACTUAL INDENTION

1 2 3 4 5 6 7 Description
Article, Main group or Main assembly
. Assembly
(Attaching Parts)
. Attaching parts for assembly
---*---
. . Detail parts for assembly
. . Subassemblies
(Attaching Parts)
. . Attaching parts for subassemblies
---*---
. . . Detail parts for subassemblies
. . . Sub-subassemblies
(Attaching Parts)
. . . Attaching Parts for sub-subassemblies
---*---
. . . . Detail parts for sub-subassemblies

Note. The nomenclature for the first entry for each separately illustrated assembly, subassembly, etc, shall begin under indention one in the Description column.

CODED INDENTION

INDENT	DESCRIPTION
1	ARTICLE, MAIN GROUP, OR MAIN ASSEMBLY
2	ASSEMBLY
	ATTACHING PARTS
2	ATTACHING PARTS FOR ASSEMBLY
	-- -*---
3	DETAIL PARTS FOR ASSEMBLY
3	SUBASSEMBLIES
	ATTACHING PARTS
3	ATTACHING PARTS FOR SUBASSEMBLIES
	---*---
4	DETAIL PARTS FOR SUBASSEMBLIES
4	SUB-SUBASSEMBLIES
	ATTACHING PARTS
4	ATTACHING PARTS FOR SUB-SUBASSEMBLIES
	---*---
5	DETAIL PARTS FOR SUB-SUBASSEMBLIES

3.5.1.3.1 Indention spacing.—When actual indention is used, the indention in the Description column of the Group Assembly Parts List shall be indicated by leader points or periods, one point or period to signify each indention. When the nomenclature exceeds a single-line presentation, the second or following lines shall be indented two ems or two indentions additional from the first line.

3.5.1.4 Parts to be listed.—The Group Assembly Parts list shall list all parts of the end article, its systems, equipment, and special support equipment capable of separate maintenance, except as otherwise specified in 3.5.1.1 and the following paragraphs.

3.5.1.4.1 Government Furnished equipment/Government-Furnished aeronautical equipment (GFE/GFAE).—The item proper and attaching parts only shall be listed for GFE/GFAE items which are a part of the article. Following the description, the type or model number, the specification(s) number, and the abbreviation GFE shall be shown.

3.5.1.4.1.1 When standard part numbers have not been established for the GFE/GFAE item and all its components, the manufacturer's part number for the item shall appear in the Part Number column and the manufacturer's code (or complete name if no code has been assigned) shall follow the description. For example:

Part No.	1 2 3 4 5 6 7 Description
7044R53	ENGINE, Turbo-jet, Model J79—GE—3, GFE (94791)

3.5.1.4.2 Contractor-Furnished equipment/Contractor-Furnished aircraft equipment (CFE/CFAE) (either manufactured by the end-article contractor or procured by him from vendors).—When the procuring activity has procured a separate Illustrated Parts Breakdown for a CFE item which is part of the article, or has indicated that it will procure one, only the item proper, its attaching parts, and parts replaceable at Organizational and Intermediate levels of maintenance shall be listed. Otherwise, all parts shall be listed as required in 3.5.1.4.

The listings of Organizational and Intermediate-level parts shall be preceded by the words "Partial breakdown follows", to make it clear that these are not all the detail parts of the item. Items listed as replaceable at Organizational and Intermediate levels of maintenance should not conflict with any code assigned. Exception: In Illustrated Parts Breakdowns for guided missiles and aircraft, parts replaceable at Organizational and Intermediate levels which are parts of major components shall be listed or omitted as directed by the procuring activity.

3.5.1.4.3 Other items.—The following types of items shall not be listed:

a. Parts which lose their identities by being welded or joined to other pieces as a permanent unit.

b. Items made from raw (bulk) stocks, such as lock wire, bonding braid, upholstery cloth, friction tape, etc.

c. Structural items, such as stringers, stiffeners, skin, doublers, gussets, etc, which serve no purpose in description of parts relationship or attachment of significant procured parts. (Normally applicable to airframes only.)

d. Commonly used hardware, such as standard rivets, screws, nuts, bolts, cotter pins, washers, etc, except that those used as attaching parts for frequently detached items shall be listed. (Normally applicable to airframes only.)

3.5.1.4.4 Items requiring special attention.

3.5.1.4.4.1 Oversize and undersize parts.—When oversize and undersize parts are required and furnished and they are neither interchangeable with nor within allowable production tolerances of the standard size part, they shall be identified in accordance with the contract drawing specifications and descriptive information shall be included which indicates all dimensional differences. (See figure 15.)

3.5.1.4.4.2 Tolerances for electrical/electronic parts.—Percentages or actual values or allowable tolerances for such items as nonmilitary standard resistors, capacitors, etc, shall be shown as a part of the description, expressed as plus and minus values. Example: EB4745 RESISTOR, Fixed, composition, 1000 ohms, +5 percent, −10 percent, 1/2 w. The noun name is adequate description for Government standard resistors, capacitors, etc.

3.5.1.4.4.3 Undrilled or untrimmed parts.—Design activity part numbers, in accordance with contract drawing specification requirements, shall be assigned to each part requiring drilling or trimming before installation. Notes shall be included in the Description column to indicate that such parts require drilling or trimming at time of installation. Example: 5256750 BRACKET ASSY, Hydraulic accumulator, lower. (Drill on installation.)

3.5.1.4.4.4 Matched parts.—Parts which would normally be individually procured, such as gears, cams, hydraulic sleeves and pistons, resistors, and vacuum tubes, but which have been machined to fit as a matched set or lapped assembly, or matched electronically to meet circuit requirements, shall be coded or annotated to indicate that the parts are not to be requisitioned separately because they are in a set and that the set of matched items or the next higher assembly must be requisitioned. (See figure 17.)

3.5.1.4.4.5 Quick change units.—Items comprising a quick engine change assembly, or other quick change unit used as a maintenance spare to support the article, shall be identified by the symbol "QCU" located at the far right of the last line of the Description column. Following the breakdown of the group or assembly to which the quick change unit relates, there shall be a straight-line listing of all parts required to complete the unit, including those omitted pursuant to 3.5.1.4.3 as well as adapting parts, except where the quick change unit is to be repaired only at depot level, such as electronic equipment modules. In these cases, no parts listing shall be made. In all cases, the part number and description of the quick change kit, if applicable, shall follow the breakdown of the quick change unit.

3.5.1.4.4.6 Government standard items containing nonstandard detail parts.—Items covered by Government standard drawings, including assembly drawings, shall be listed under the Government Standard assembly part number except when the item contains repair parts which are not designated by Government detail design drawing numbers. In such cases, the item shall be identified by the design manufacturer's part number in the Part Number column and the Government Standard part number, when known, shall be shown in the Description column. Example: 407633 GAGE, Air pressure (78239) AN5771-7A.

3.5.1.4.4.7 Government standard parts.—Government standard parts shall be listed by the appli-

cable MS, AN, AF, NAF, MIL, or JAN part number or specification number in the order of preference indicated in the contract drawing specifications. Complete Government numbers, including prefixes and suffixes to the basic number, shall be shown in the Part Number column.

3.5.1.4.4.8 Altered, selected, or source controlled Government Standard, vendor, and commercial items.—When any Government standard, vendor, or commercial item is altered or selected or is a source controlled item because of special fit, tolerance, weight, or reliability of performance, the part number of the design activity responsible for the alteration, selection, or source control shall appear in the Part Number column. Repainting, reidentifying, or other nonsignificant operations shall not be considered alterations, selections, or source controls.

3.5.1.4.4.9 Commercial hardware.—Commercial hardware procurable from normal commerical sources and not identifiable as Government standards shall be identified in the Part Number column by the manufacturer's part number. If a part number has not been assigned, the item shall be identified as commerical by the symbol "COML" in the Part Number column and identifying information such as dimensions, size, material, type, special features, and commercial catalog number shall be entered following the description. Such information shall be sufficiently complete to enable the procuring activity to make replacement procurements from commercial sources.

3.5.1.4.4.10 Similar assemblies.—If right and left, top and bottom, front and rear, or other similar or symmetrically opposite assemblies contain a majority of identical parts, the assemblies shall be combined and broken down as follows: (See figures 12 and 17.)

a. Both assemblies shall be listed first, followed by the detail parts in disassembly order.

b. Parts peculiar to only one assembly shall have indicated, by code, footnote, or description, the assembly of which they form a detail.

c. Parts identical but differing in quantity per assembly shall be listed separately and be coded or explained by footnote or explained in the Description column.

d. Parts identical and used in the same quantity shall be listed only once, and the Units Per Assembly column shall show the quantity required for one assembly only.

e. If a sufficient number of parts are not identical to both assemblies, or if the continuity of idention cannot be maintained by combining the listings, such assemblies shall be broken down separately.

3.1.4.4.10.1 Symmetrically opposite parts.—Symmetrically opposite parts shall be identified in accordance with the contract drawing specifications. Symmetrically opposite parts shall be listed on separate lines.

3.5.1.4.4.11 Articles without part numbers.—Type and model numbers for equipment of Bureaus or Departments, such as Signal Corps, Bureau of Ships, or Bureau of Yards and Docks, shall not be listed in the Part Number column. The words "No Number" shall be inserted in the Part Number column in these cases. For example:

Part No.	1 2 3 4 5 6 7 Description
No Number	ANTENNA (Type A16 ARC) (00781)

3.5.1.4.4.12 Vendor items.—When vendor items are listed, the vendors' part numbers shall be entered in the Part Number column. Vendor items are those used by the contractor exactly as produced by the vendor. The last sentence in 3.5.1.4.4.8 regarding nonsignificant changes applies.

3.5.1.4.4.12.1 Description of vendor items.—The description of vendor items shall include information as to the type, model, or applicable Government specification and the vendor code as designated in Cataloging Handbook H4-1 and H4-2, Federal Supply Code for Manufacturers. (See figures 13 and 17.) When a manufacturer's code for the vendor is not included in H4-1 or H4-2, the name and address of the manufacturer shall be given. The method of listing the vendor information depends on the type of drawing used to procure the vendor's item by the design activity. For vendor items illustrated on a

a. Source control drawing: the source control drawing number shall be given in the Part Number column.

b. Specification control or envelope drawing: the vendor's part number shall be given in the Part Number column and the specification control or envelope drawing number in the Description column. For example:

Part No.	1 2 3 4 5 6 7 Description
754386	VALVE, Pressure relief, pneumatic system, 1500 psi (20304), Douglas Spec Cont Dwg 5557771

3.5.1.4.4.12.2 Alternate vendor items.—Alternate vendor items used by the contractor for production installation shall be listed and identified as alternates either following the description or by symbols and footnotes on the page on which they appear. If the same vendor item appears several times in a manual it is not necessary to repeat the alternates at each listing. The alternates shall be shown following the first listing, and subsequent listings of the vendor item may reference the first listing for information on the alternates.

3.5.1.4.4.13 Redesigned parts.—When the design or the material of a part is changed to the extent that interchangeability or physical or functional performance is affected, the new part number assigned in accordance with the contract drawing specification shall be listed. The original part shall be omitted when not authorized for continued use. If the original part has continued application, the applicable model, block numbers, and serial numbers of the items on which the part is usable shall be indicated by the Usable On code system. Such notes as "Alternate for" or "Use until exhausted" should follow the description as applicable. (See figures 10 and 13.)

3.5.1.4.4.14 Items requiring LOX or special cleaning.—Following the nomenclature of a part, insert a code (and explain it in the Introduction) for parts requiring LOX or special cleaning to assist in the identification of such parts when hazardous conditions could result because of lack of this information.

3.5.1.5 Main groups and assemblies.—Main groups shall begin on new pages; assemblies shall begin on new pages when use of the space remaining on a page from the preceding assembly would result in poor layout.

3.5.1.5.1 Assignment of index numbers.—Index numbers shall be assigned to all parts having maintenance or supply significance, except as noted below. Index numbers shall be assigned to the parts listing first and then transposed to the figure, to insure that the index numbers fall in sequence in the breakdown. When the same part appears more than once in an illustration and it is necessary to list it more than once in the breakdown, it shall be assigned a different index number for each listing. No index number shall be assigned to an assembly when all detail parts are indexed unless such assembly is also illustrated completely assembled on the illustration. To eliminate the necessity of renumbering all the index numbers that follow, parts that are added to a listing by change may be assigned suffixed numbers such as 2A, 2B, 2C, etc. This system may also be used in basic manuals (initial issues) and revisions when errors are discovered so late in preparation that renumbering of all following index numbers would delay submittal.

3.5.1.5.1.1 Index numbers for attaching parts.—Fastening groups used at the same location (for example, a relay attached by a multiple number of nuts, bolts, and washers) need not be individually illustrated or identified by index number. One index number assigned to the group and so indicated in the listing is sufficient. In case of attaching parts which obviously can be installed in only one manner, no index number need be assigned. (See figure 12.)

3.5.1.5.2 Attaching parts.—Attaching parts shall be listed immediately beneath the item to be attached and preceding any detail parts of the item. They shall be listed at the same indention as the part they attach and shall be captioned "(Attaching Parts)". The caption "(Attaching Parts)" shall be placed one indent to the right of the part to be attached, and on the line immediately above the listing of attaching parts. The separation symbol "———*———" shall follow the listing of attaching parts in order to distinguish between attaching parts and subsequent listings of parts with the same indention or detail parts of the next indention to the right. The separation symbol shall have the same indention as the caption "(Attaching Parts)." (See figure 10.)

3.5.1.5.2.1 Alternate method for identifying attaching parts.—An abbreviation may be used to follow attaching parts which will eliminate the need for separation lines. The Introduction shall explain the abbreviation. Example of the system explained in 3.5.1.5.2 and the alternate follows:

Plate	Plate
(Attaching Parts)	Screw (AP)
Screw	Washer (AP)
Washer	Connector
———*———	
Connector	

3.5.1.5.3 Parts kits.—When repair parts for the article or for repairable units within the article are to be supplied in the form of kits, a part number shall be assigned to each kit in accordance with the contract drawing specification requirements. An appro-

priate notation shall be inserted in the Description column, following the description of the article or unit for which the kit is supplied, of the fact that parts kit(s) are available. The kit(s) shall be placed last in the listing of parts of the unit to which it applies and at the same indention as the unit to which it applies. Contents of the kit not previously listed in the breakdown shall be listed, indented one indention, below the kit description. The kit components which are listed in the breakdown shall carry the appropriate kit code as part of the description. Listings of supplemental kits shall follow the listing of original kits in the same manner as prescribed herein. (See figures 10 and 13.) Separate illustrations for kits need not be shown.

3.5.1.5.4 Markings.—Decals, metalcals, and vinyl film markings are to be considered as parts. The identifying drawing number for each marking shall appear in the Part Number column. The nomenclature or title of each marking shall appear in the Description column. Markings should be illustrated but a separate readable illustration of each is not necessary; showing the location of the marking is equate.

NOTE: The type of markings for which information is required would be those that provide instructions, provide identification for a reparable assembly, would require replacement, or need to be requisitioned separately. It is not intended that a marking be listed or illustrated if: it was attached to a part or a nonreparable assembly merely to identify it, instead of having the part number stamped or etched on the part; the parts or nonreparable assemblies are stocked, stored, and issued with the marking attached thereto; the part, not the marking is replaced; the marking should not be requisitioned separately. However, if an illustration of these latter parts or nonreparable assemblies would appear to be incomplete if the marking attached thereto was omitted, then it would be proper to show, but not list, the marking.

3.5.1.6 Figure and Index Number column.—This column shall contain the assigned number of the illustration in which the assembly or part is shown, and the index numbers called out on the illustration. The figure number shall be separated from the index number by a hyphen or space, and need not be repeated on the same page in consecutive listing. (See figure 17.) Index numbers shall be in numerical sequence starting with 1.

3.5.1.7 Part Number column.—This column shall contain the part number assigned to each part in accordance with the contract drawing specification. (Refer to 3.5.1.4.4.8 and 3.5.1.4.4.12.1 regarding altered, selected, source-controlled, and specification-controlled parts.)

3.5.1.8 Description column.

3.5.1.8.1 Item identification.—The description of all items appearing in the Group Assembly Parts List shall consist of the nomenclature placed in the drawing title block by the design activity in accordance with the contract drawing specification. The noun name is adequate description for Government standard parts.

3.5.1.8.2 Arrangement of wording.—Wording shall be arranged so that the identifying noun or key word will always be the first part of the description. If the item is an assembly or installation, the word ASSEMBLY or INSTALLATION shall immediately follow the noun. This shall be followed by the balance of the modifying words included in the drawing title description. Words such as upper, lower, inner, outer, front, and rear, when they modify the part noun, shall be placed next in the description. Modifiers shall be separated by commas or when EAM equipment is used by a space or a dash. The Description column shall include the space under the seven numbered sub-columns to facilitate breakdown identification. Vendors' codes (or complete name if no code has been assigned) and references to other manuals shall follow the description. Necessary references to other figures for next higher assembly, or for a separately illustrated detail breakdown, shall be included in the Description column. (See figure 10.)

3.5.1.8.3 Dimensions.—When units of measurement are the same, they shall not be repeated with each dimension. Example: "1/8 by 21/32 inches". To avoid confusion, a hyphen shall be used between a whole number and a fraction. For example: "1-1/16, 2-3/32, 4-9/64". When a decimal with a value of less than 1.0 is given, a zero shall precede the decimal point. For example: 0.002 inch.

3.5.1.8.4 Capitalization.—The item name shall be in upper case letters. The first letter of the first word immediately following the item name shall be in upper case. The first letter of proper nouns, regardless of location, shall always be capitalized. When electric accounting machines are used, the entire description may be in upper case letters.

3.5.1.8.5 Abbreviations.—Abbreviations shall be held to an absolute minimum, and when used shall be limited to forms listed in MIL-STD-12, except

that upper or lower case may be used. Other essential abbreviations if explained in the Introduction may be used, such as "AR" for As Required.

3.5.1.8.6 Leaders.—Leaders (a series of small points) shall be used to join the Description and the next column to the right. In descriptions comprising more than one line, leaders shall be used only on the first line, as necessary.

3.5.1.8.7 Make-from instructions.—When a part has been source coded MF by the procuring activity, the raw (bulk) stock from which the part is to be made will be listed. This listing will be preceded by the words "MAKE FROM".

3.5.1.9 Units per Assembly column.—This column shall contain the number of units required per assembly, per subassembly, and per sub-subassembly, as applicable. If more than one assembly is required, the total of such assemblies shall be shown. For detail or subassembly parts of this major assembly, the quantity required for one major assembly shall be shown. For oversize or undersize parts, the letters "AR" shall be shown in the Units per Assembly column to indicate "As Required". (See figure 15.) Where items are listed for reference purposes, the letters "REF" shall be inserted in the Units Per Assembly column. Items referenced may show a quantity where they are listed assembled or listed in detail and then show "REF" in other appearances. In multiple-line descriptions, the quantity in the Units Per Assembly column shall be opposite the first line of the Description.

3.5.1.10 Usable On Code column.—This column shall contain suitable coding for assemblies and parts to indicate specific usability by serial, type, model, or series numbers on the articles for which the Breakdown is prepared. (See figure 14.) When specific usability can be shown simply, as by Mk & Mod numbers and occasional notations, use of coding is not required. (See figure 15.) However, when coding is desirable for clarity and space conservation, a coding system such as the systems shown below shall be used. When applicable, Usable On codes shall be employed to indicate that a part is usable only after, or before, incorporation of a service change or Technical Directive. The Usable On Code column will be left blank unless the applicability of a part is limited to a given portion of the articles covered by the Breakdown, and the Introduction shall contain a statement to the effect that where no Usable On Code appears, the part is applicable to all articles.

EXAMPLE A

Master Usable On Coding List

Usable On Code	Model Designation	Serial Numbers
A	J-100-54	56251 to 56300
B	J-100-54	56301 to 56500
C	J-100-54	56501 to 56750
D	J-100-54	56751, 56755, 57801, 57802
E	J-100-54	56752, 56790, 57001
etc	• • • • • • • • • • • • •	
Z	J-100-60	59251 to 59500
AA	J-100-65	57501 to 57800
AB	J-100-65	57901 to 58000
etc	• • • • • • • • • • • • •	
BZ	J-100-95	59501 to 59575
CA	J-100-95	59501 to 59575 with Service Change 103 inc.

Each Master Usable On Coding List shall start with the upper case letter "A". If the single letters of the alphabet are not adequate for complete coding, double letters shall be used.

NOTE This coding system is generally suitable where extensive coding of a Breakdown is necessary.

EXAMPLE B

Master Usable On Coding List

Usable On Code	Model Designation	Serial Numbers
	J-100-40, -54, -60, -65, -71, -73, -87, -95	ALL
1	J-100-40	56001 to 56250
2	J-100-54	56251 to 56800
2A	J-100-54	56251 to 56400
2B	J-100-54	56401 to 56500
2BA	J-100-54	56401 to 56425
2BB	J-100-54	56426 to 56500
2C	J-100-54	56501 to 56800
3	J-100-60	56801 to 57500
4	J-100-65	57501 to 57750
4A	J-100-65	57501 to 57600
4B	J-100-65	57601 to 57750
5	J-100-71	57751 to 58500
6	J-100-73	58501 to 59000
7	J-100-87	59001 to 59250
8	J-100-95	59251 to 59500

NOTE. This system is not recommended for the more complicated coding problems. Consideration should be given to Example A when a complicated coding problem is anticipated.

3.5.2 Illustrations.—Illustrations shall be prepared in accordance with MIL-M-5474. Each assembly and subassembly included in the Group Assembly Parts List shall be illustrated to the degree required to identify its detail parts, including attaching parts. When necessary for clarity, a location sketch shall appear on illustrations showing the location of the illustrated assembly as related to the complete article. (See figures 11 and 16.) When a number of identical parts, including attaching parts, are used in the same location, only one need be illustrated.

3.5.2.1 Photographs and line drawings.—Either photographs or line drawings, or some of each, may be used. Illustrations shall be exploded when necessary to identify detail parts which cannot be shown clearly by use of an assembled illustration. (See figures 11 and 16.) If disassembly relationship is either not required or can be clearly shown in an assembled view, the detail parts shall not be exploded merely to make the attaching parts visible.

3.5.2.2 Attaching parts.—Attaching parts shall be assigned index numbers consistent with index numbers assigned in the breakdown and shall be exploded only when the assembly procedure is hidden and sufficiently complex to merit explosion. If the attaching parts are not visible in the illustration (for example, the nuts attaching a transformer will not be visible on a chassis top view), a consolidated callout (one index number assigned to an attaching parts group, such as nut, bolt, washer) may be used with the leader line terminating on the visible attaching part. (See figures 11, 12, and 16.)

3.5.2.3 Separate views of subassemblies.—Where impractical to show completely in one illustration all the detail parts of each subassembly contained in any one assembly, a subassembly may be illustrated completely assembled on this illustration and a separate exploded view of the subassembly furnished. Such a subassembly should be assigned an index number where illustrated completely assembled, and a notation should be inserted in the Description column referring to the applicable separate subassembly figure. The subassembly figure shall be cross-referenced to the assembly.

3.5.2.4 Parts to indicate relationship.—Some illustrations may require the inclusion of certain parts not listed to show the relationship of the parts in the assemblies illustrated. These parts shall be toned down or shown in phantom to give emphasis to the assemblies or parts listed. (See figure 22.)

3.5.2.5 New assemblies and parts.—When an assembly or part used on a later model differs from an assembly or part used on the basic model, and the change is such that the illustration of the assembly or part used on the basic model will not adequately portray the new assembly or part, the latter may be illustrated where practicable on the illustration for the basic model. If space does not permit the employment of this method of illustration, a separate complete illustration showing the new assembly or

part shall be furnished. It shall be placed immediately following the illustration for the assembly or part of the basic model.

3.5.2.6 Symmetrically opposite parts and similar assemblies.—When impracticable or unnecessary to illustrate both right and left, top and bottom, front and rear, and other similar parts and assemblies, and when both parts have the same appearance and functional purpose but different part numbers, such parts and assemblies shall be illustrated once with an index number shown in the listing for the first part listed.

3.5.2.7 Index numbers.—Index numbers with leader lines to the parts to which they pertain shall be used on all illustrations with the exception of circuit boards. On illustrations of circuit boards the index numbers may be placed within the part to which they pertain. Index numbers shall be applied only to parts that are listed in the breakdown. The index numbers on each illustration shall agree with those shown in the breakdown.

3.5.2.8 Figure titles and numbering.—Illustrations shall be assigned figure titles. Figures shall be numbered consecutively throughout the Group Assembly Parts List. Figure numbers shall be in accordance with MIL-M-5474 except that the section number shall not be used as part of the figure number. The figure title shall appear below the illustration and shall be the same item name given in the Description column of the Group Assembly Parts List for the system, assembly, subassembly or sub-subassembly illustrated, except that it will be in normal reading order. (See figure 15.)

3.5.2.9 Group titles.—The title of the applicable Main Group, such as Flight Controls, Amplifier, Receiver Unit, or Elevation Power Drive, may be inserted at the top center of illustrations. (See figure 16.)

3.5.2.10 Location of illustrations.—Normally, all illustrations will be placed on the page facing the related text. If there is more than one page of listing, the first page will be the facing page, with other pages following in proper sequence. Where illustrations and listings cannot conform satisfactorily to the form outlined above, illustrations shall precede related listings except where such placement results in excessive blank space. In such cases, illustrations shall be placed as close as possible to the beginning of the related listing.

3.5.2.11 System illustrations.—When applicable, functional systems shall be separately illustrated. (See figures 18 and 19.) These illustrations shall be keyed to the illustrations of the assemblies containing the detail parts of a particular system. System illustrations are to be system indexes so that the separate assembly sections can be readily located in the Group Assembly Parts List. For example:

Power Plant
Oil Drain System
Ignition System
Water Injection System
etc

Aircraft
Electrical System
Heating System
Oxygen System
etc

Electronics
Antenna
Microphone and Headset
etc

Armament
Bombing System
Fire Control System
Gun Sight System
Gun Booster System

Accessories
Hydraulic System
Electric System

3.5.2.12 Special support equipment illustrations.—The number of illustrations required to show the special support equipment shall be commensurate with the number of equipments required to support the article, their complexity, and their interchangeability. There shall be a key, or main illustration with accompanying parts lists, which shall include all items of special support equipment required to support the end article. All items that require breakdown shall have, in this parts list, a reference to the figure (or to the separate manual) which breaks down the item. (See figures 20 through 23 for typical key listings of special support equipment.)

3.6 Section III—Numerical Index.—Section III of the Illustrated Parts Breakdown shall consist of a Numerical Index. (See figure 24.) In multiple-volume Illustrated Parts Breakdowns, the Numerical Index will be the first volume, and within this volume Section I will be the Introduction, Section II the Numerical Index, and Section III the Reference Designation Index, if applicable. If codes (source, accountability, recoverability) are not available when the original issue of the breakdown is prepared, a second Numerical Index will not be required until the appropriate codes do become available. Originally, the second Numerical Index shall consist of one page stating that temporary use shall be made of

the preceding Numerical Index except for the code information.

3.6.1 Arrangement of columns.—Three columns shall be placed across the width of the page. Columns shall have the content and be arranged as shown in figure 24.

3.6.2 Part Number column.—This column shall contain the part numbers of all parts that comprise the article(s) covered by the Illustrated Parts Breakdown, including superseded parts which have continued application. However, the parts of GFE/GFAE and CFE/CFAE items which have been listed only as complete assemblies in the Group Assembly Parts List shall not be included. (Refer to 3.5.1.4.1 and 3.5.1.4.2.)

NOTE: The part number column shall contain all the part numbers:

a. That appear in the Group Assembly Parts List.

b. That appear in the approved Provisioning Parts Breakdown.

c. Of superseded parts.

d. Of parts on which a number is stamped, etched, stenciled, etc.

e. Of the original manufacturer, if for some reason, another number has been assigned thereto.

When applicable, part numbers shall be followed by appropriate notes, such as "Superseded by _____." "See P/N . . . . . ," etc. These notes will extend into the columns that follow the Part Number column and be cross-references to new part numbers, next higher assemblies, and numbers under which parts are to be requisitioned.

3.6.2.1 Alpha-Numerical arrangement sequence.—Part number arrangement shall begin on the extreme left-hand position and continue from left to right, one position at a time, until all parts are arranged in sequence.

3.6.2.1.1 First position arrangement.—The order of precedence in beginning the part number arrangement on the extreme left-hand (first) position of the part number shall be as follows:

Letters A through Z

Numerals 0 through 9

NOTE: Alphabetic Os shall be considered numerical zeros.

3.6.2.1.2 Second and succeeding position arrangement.—The order of precedence in continuing the part number arrangement in the second and succeeding positions of the part number from left to right shall be as follows:

(1) Space (blank column)

(2) Diagonal (slant)

(3) Point (period)

(4) Dash (-)

(5) Letters A through Z

(6) Numerals 0 through 9

NOTE: Alphabetic Os shall be considered numerical zeros. Spaces, diagonals, and decimal points, if used in old part numbers, shall take precedence over letters and numerals as indicated above.

3.6.2.1.3 Sample application.—The following list of part numbers is in correct numerical sequence:

AN931-4-16	B2	16W060
A2460	SOCKET	32P010
A3176543	114041Y17	32P010-10
A32	121873S081-1931	39A46-1 3-4 7-8
BATTERY	12857-5 13857-3	405P003

NOTE: Commercial hardware and other parts to which part numbers have not been assigned shall be listed in sequence, considering the identifying noun as the part number. (See figure 24.)

3.6.3 Figure and Index Number column.—This column shall contain the figure and index number(s), as applicable, for all parts listed. For Government Standard Parts and Contractor Standard Parts, only the first figure and index number that occurs shall be listed. When an assembly or part has not been assigned an index number in the Group Assembly Parts List, only the figure number shall appear. The part number need not be repeated when more than one figure and index number is shown for the same part. In Illustrated Parts Breakdowns having a multi-volume Group Assembly Parts List, the figure numbers in this column will be preceded by a numeral indicating the applicable volume; for example: 2-4-10 (Volume 2, figure 4, index 10), and the column heading shall include "Volume". (See figure 24.)

3.6.4 Code columns.—The Government-assigned codes indicated below shall be shown for every part number listed. (See figure 24.) These

codes will be furnished by the procuring activity during or subsequent to provisioning actions. They will not be assigned by the contractor except as specifically provided in the provisioning document applicable to the contract. When a contractor has received codes from the procuring activity before the cutoff date of the basic manual, these codes shall be included before the basic manual is accepted. Codes, or changes to codes, received by the contractor after the cutoff date of the basic manual, or after the cutoff date of any change or revision, shall be included in the first change or revision after such cutoff date before acceptance of the change or revision. Codes to be included, when and if assigned, are:

a. Source codes.

b. Accountability/Recoverability codes.

c. Kit codes.

3.7 **Section IV—Reference Designation Index.**—When reference designations have been established for any electrical and electronic parts listed in the Illustrated Parts Breakdown, then a Reference Designation Index is required and shall consitiute Section IV of the Illustrated Parts Breakdown. (See figure 25.) In multiple-volume Illustrated Parts Breakdowns, the Numerical Index and Reference Designation Index will be the first volume, and within this volume the Introduction will be Section I, the Numerical Index Section II, and the Reference Designation Index Section III.

3.7.1 Arrangement of columns.—Three columns shall be placed across the width of the page. Content and arrangement of these columns shall be as shown on figure 25.

3.7.2 Reference Designation column.—This column shall contain all reference designations shown on schematics and wiring diagrams and those contained in the text of Operating, Service, Maintenance, or Overhaul manuals pertaining to the article covered by the Illustrated Parts Breakdown.

3.7.2.1 Arrangement.—The reference designations shall be listed alphabetically and numerically.

3.7.2.2 Block designations.—When the block system of designations is employed, identical items having reference designations which are consecutive and are at the same location may be grouped where possible. (See figure 25.)

3.7.2.3 Unit designations.—When the unit type designations are employed, identical items having reference designations which are consecutive and are at the same location may be grouped where possible. Identical assemblies shall be listed by the unit designations and may be cross-referenced to the first unit designation for the identical assembly, which shall be completely listed, by the words "Same as _____." (See figure 25.) The cross-reference system, when employed, shall be adequately described in the Introduction so that the user will be able to make intelligent use of the system.

3.7.3 Figure and Index Number column.—This column shall contain the Group Assembly Parts List figure and index numbers assigned to items having electrical and electronic reference designations. In Illustrated Parts Breakdowns having a multi-volume Group Assembly Parts List, the figure numbers in this column will be preceded by a numeral indicating the applicable volume, and the column heading will include "Volume."

3.7.4 Part Number column.—This column shall contain the part numbers of the items having electrical and electronic reference designations.

4 QUALITY ASSURANCE PROVISIONS

4.1 Quality assurance provisions shall be in accordance with MIL-M-5474.

5 PREPARATION FOR DELIVERY

5.1 Packaging, packing and marking for shipment shall be in accordance with MIL-M-5474.

6 NOTES

6.1 **Intended use.**—The technical manuals prepared to this specification are intended to be used for requisitioning, storing, issuing, and identifying parts and for illustrating assembly and disassembly relationships.

6.2 **Definitions.**

6.2.1 Article (equipment or end item).—An article consists of components, assemblies, subassemblies, and parts connected or associated together to perform an operational function.

6.2.2 Commercial item.—A commercial item is a supply or service which normally is, or has been, sold or offered to the public commercially by any supplier.

6.2.3 Cutoff date.—The cutoff date is the date that the contractor or procuring activity decides no more additions, deletions, and changes will be accepted to the manual material that the contractor has assembled in order to meet the scheduled deli-

very date. Additions, deletions, and changes after that date will be accumulated for preparation of a change or revision of the manual.

6.2.4 Depot level of maintenance.—That maintenance which is the responsibility of and performed by designated maintenance activities to augment stocks of serviceable material, and to support Intermediate and Organizational Maintenance activities. Encompasses Navy term Overhaul (Class A), Special (Class B), and Wing Maintenance (Marine).

6.2.5 Intermediate level of maintanance.—That maintenance which is the responsibility of and performed by designated maintenance activities for direct support of using organizations. Encompasses Navy terms Component Repair (Class C), Shop (Class D), Group Maintenance (Marine), and Tender or Repair ship (Shipboard Ordnance).

6.2.6 Maintenance.—The function of retaining material in, or restoring it to, a serviceable condition. Its phases include servicing, repair, modification, modernization, overhaul, rebuild, test, reclamation, and inspection and condition determination.

6.2.7 Organizational level of maintenance.—That maintenance which is the responsibility of and performed by a using organization on its assigned equipment. Encompasses Navy terms Hangar (Class E), Line (Class F), Squadron (Marine), and Vessel (Shipboard Ordnance).

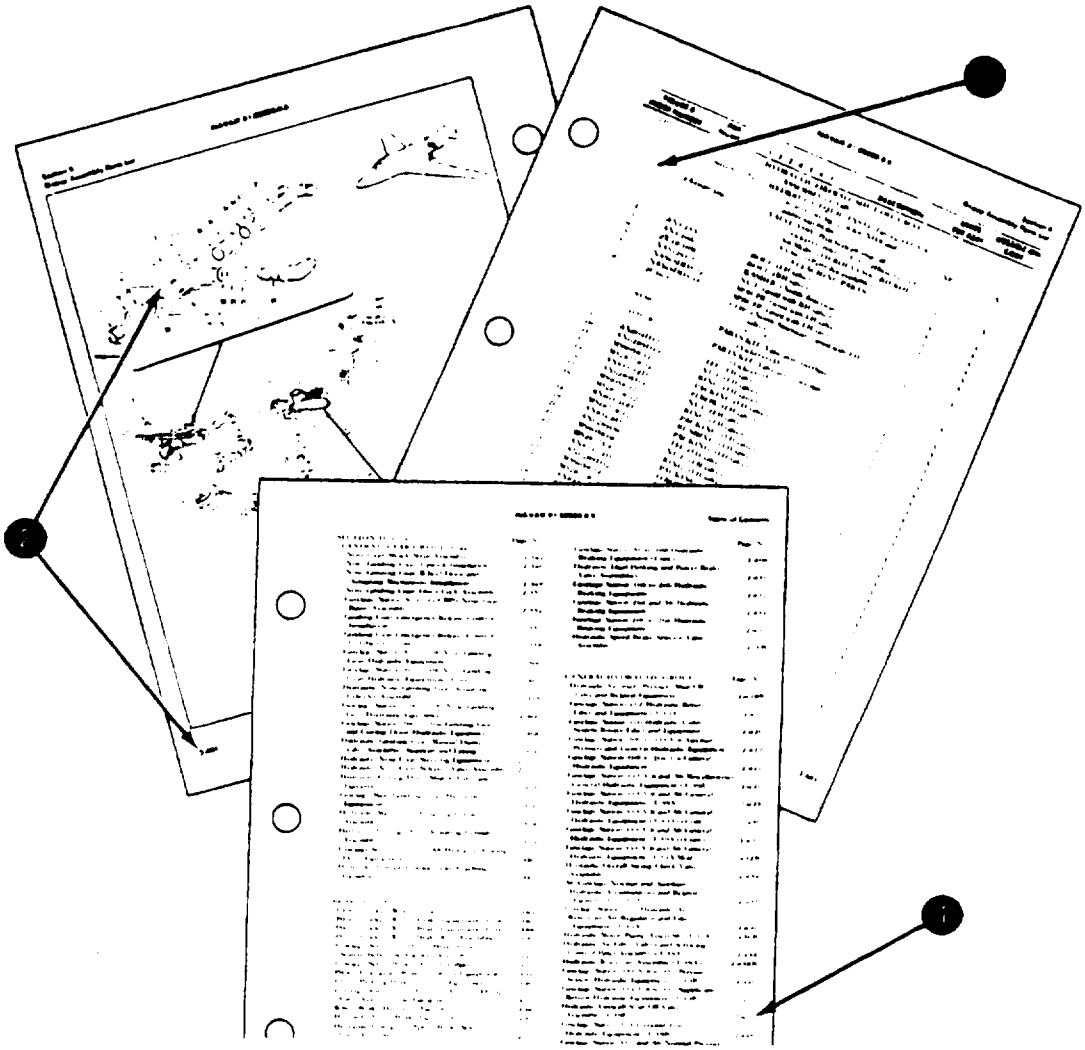
6.2.8 Special support equipment.—Support equipment which must be designed and developed in conjunction with the development of the end article on the contract.

6.2.9 Vendor.—A vendor is a design activity, manufacturer, wholesaler, or agent from whom are acquired items used in the performance of the contract.

Custodian:
Navy.—AS

Preparing activity:
Navy.—AS

HOW TO USE THE ILLUSTRATED PARTS BREAKDOWN



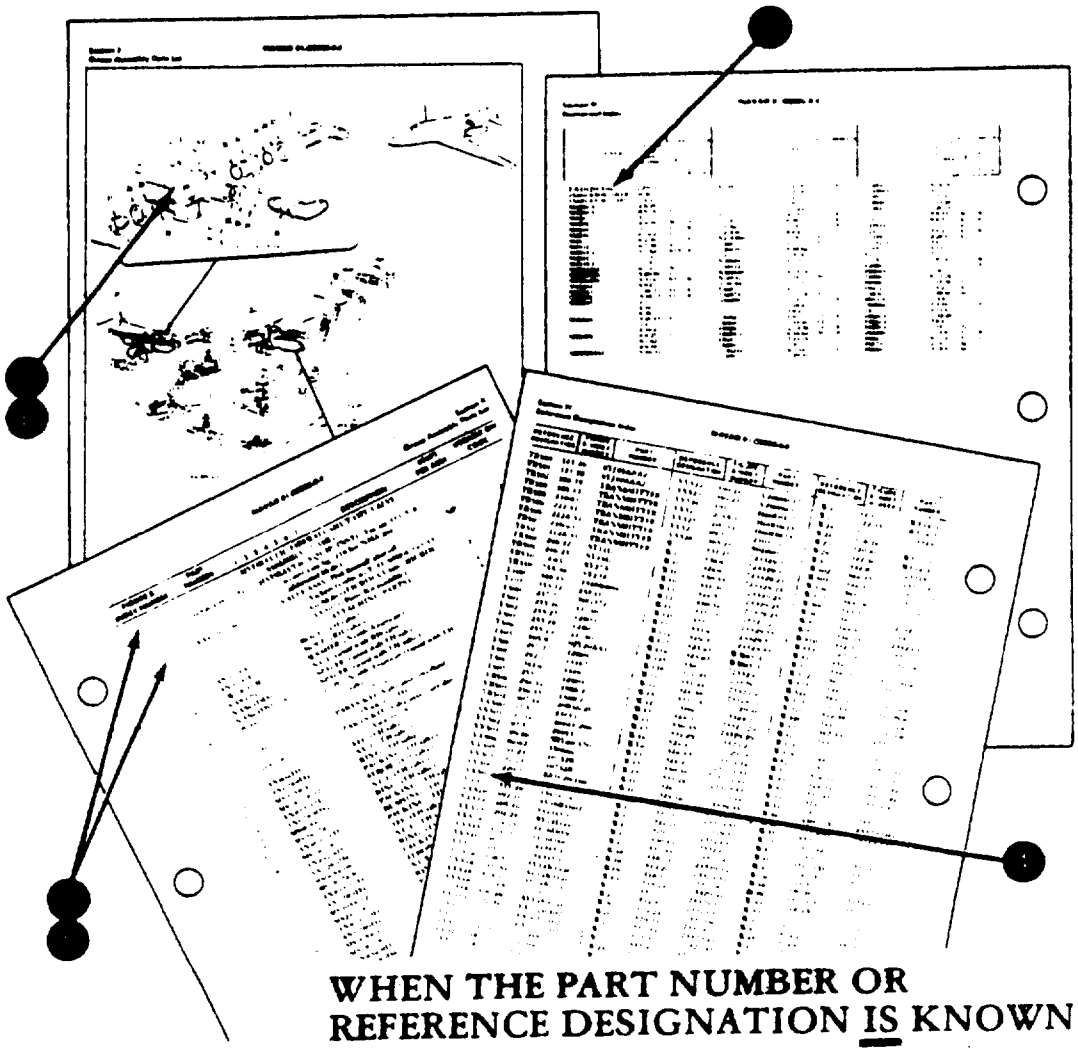
WHEN THE PART NUMBER IS NOT KNOWN

1. Determine the function and application of the part required. Turn to the Table of Contents and select the most appropriate title. Note the illustration page number.
2. Turn to the page indicated and locate the desired part on the illustration.
3. From the illustration, obtain the index number assigned to the part desired. Refer to the accompanying description for specific information regarding the part.

1-4

Figure 1. Typical Example of How to Use the Illustrated Parts Breakdown (When the Part Number is Not Known)

HOW TO USE THE ILLUSTRATED PARTS BREAKDOWN



WHEN THE PART NUMBER OR REFERENCE DESIGNATION IS KNOWN

1. When the part number is known, refer to Section III Numerical Index. Locate the part number and note the figure and index number assigned to the part number.
2. Turn to the figure number indicated and locate the index number referenced in the Numerical Index.
3. If a pictorial representation of the part, or its location is desired, refer to the same index number on the accompanying illustration.

1. When the reference designation is known, refer to Section IV, Reference Designation Index. Locate the reference designation and note the figure and index number and the part number assigned.
2. Turn to the figure indicated and locate the index number referenced in the Reference Designation Index.
3. If a pictorial representation of the part, or its location is desired, refer to the same index number on the accompanying illustration.

1.5

Figure 2. Typical Example of How to Use the Illustrated Parts Breakdown (When the Part Number or Reference Designation is Known)

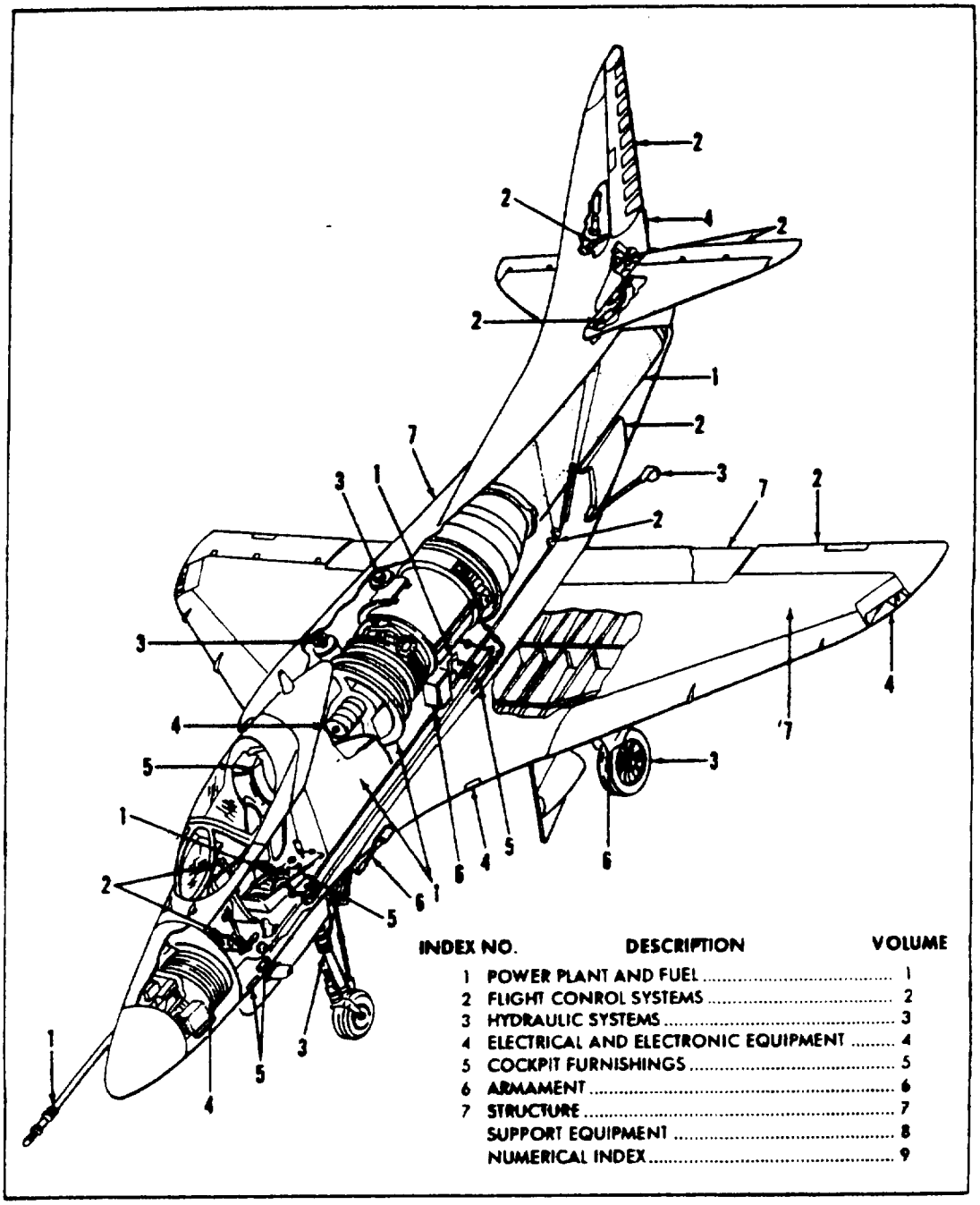
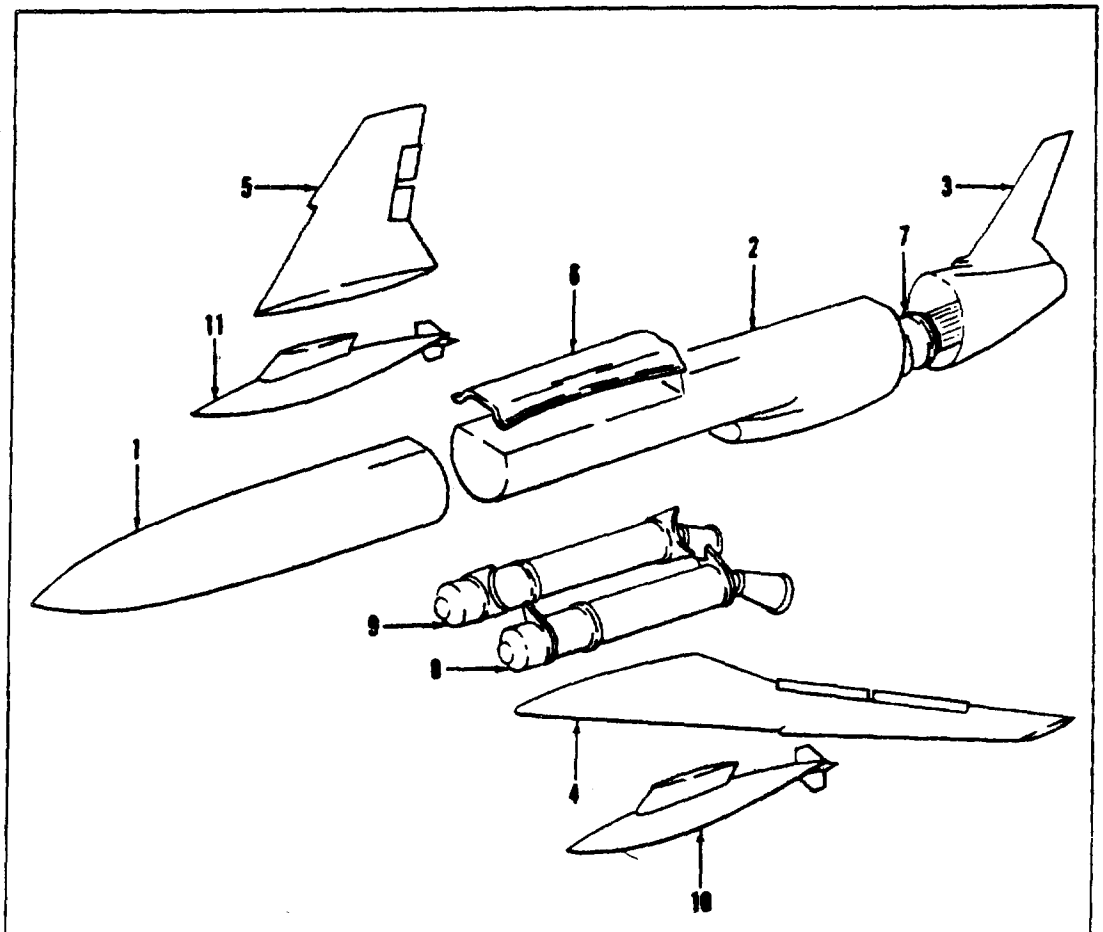


Figure 1. Aircraft Complete

2-1

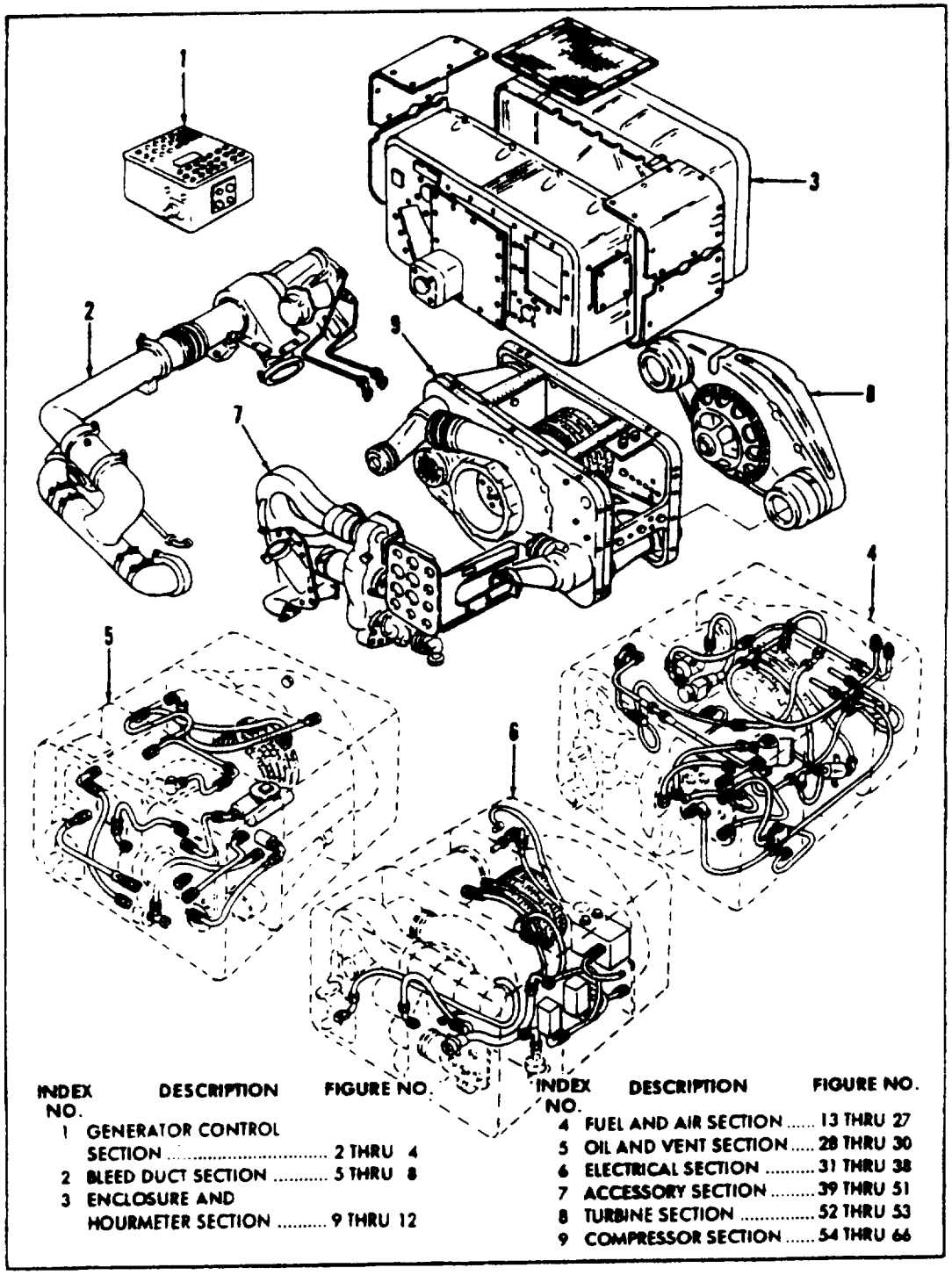
Figure 3. Typical Assembled View of Complete Aircraft (System)



INDEX NO.	DESCRIPTION	FIGURE NO.
1	FORWARD SECTION FUSELAGE	2
2	AFT SECTION FUSELAGE	14
3	EMPENNAGE	27
4	LEFT - HAND WING	35
5	RIGHT - HAND WING	35
6	CENTER WING COVER	42
7	POWER PLANT	48
8	LEFT - HAND BOOSTER	56
9	RIGHT - HAND BOOSTER	56
10	LEFT - HAND FUEL PYLON	75
11	RIGHT - HAND FUEL PYLON	75

Figure 1. Missile General Assembly

Figure 4. Typical Exploded View of Missile Airframe (Main Groups)

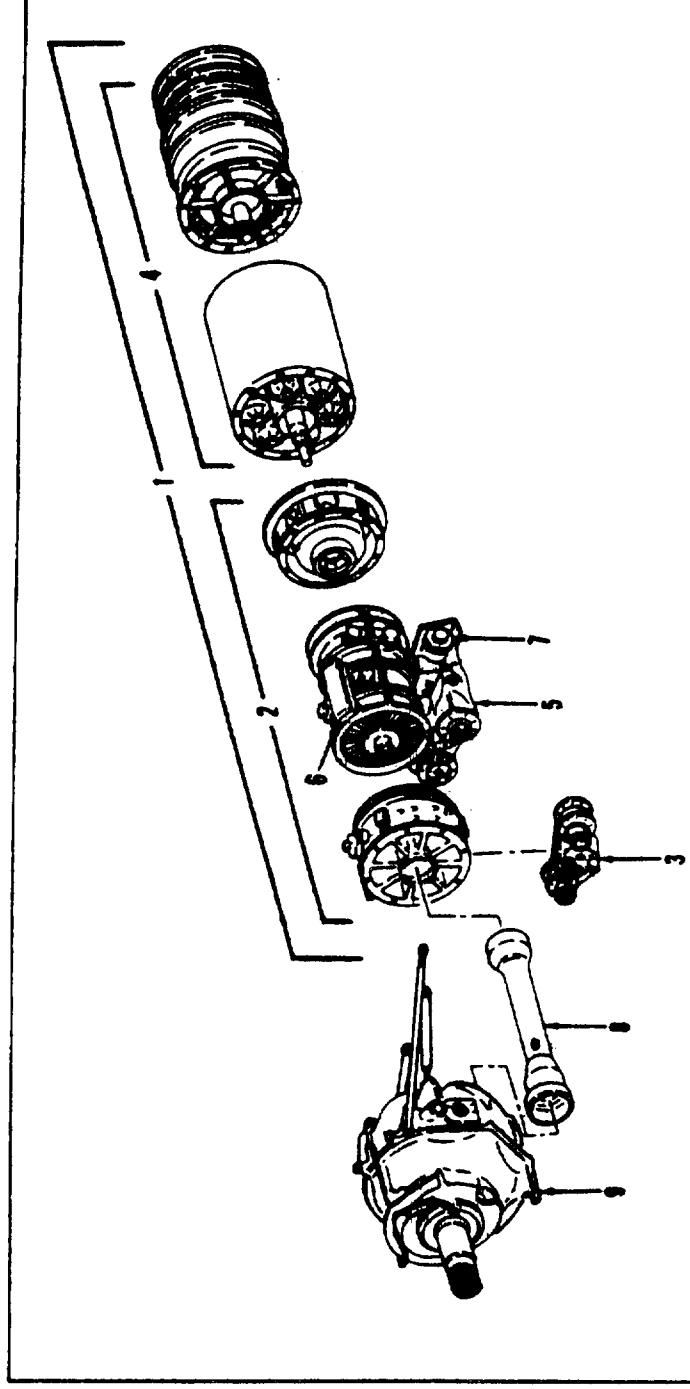


INDEX NO.	DESCRIPTION	FIGURE NO.
1	GENERATOR CONTROL SECTION	2 THRU 4
2	BLEED DUCT SECTION	5 THRU 8
3	ENCLOSURE AND HOURMETER SECTION	9 THRU 12
4	FUEL AND AIR SECTION	13 THRU 27
5	OIL AND VENT SECTION	28 THRU 30
6	ELECTRICAL SECTION	31 THRU 38
7	ACCESSORY SECTION	39 THRU 51
8	TURBINE SECTION	52 THRU 53
9	COMPRESSOR SECTION	54 THRU 66

Figure 1. Exploded View of Complete Enclosed Gas Turbine Compressor

2-1

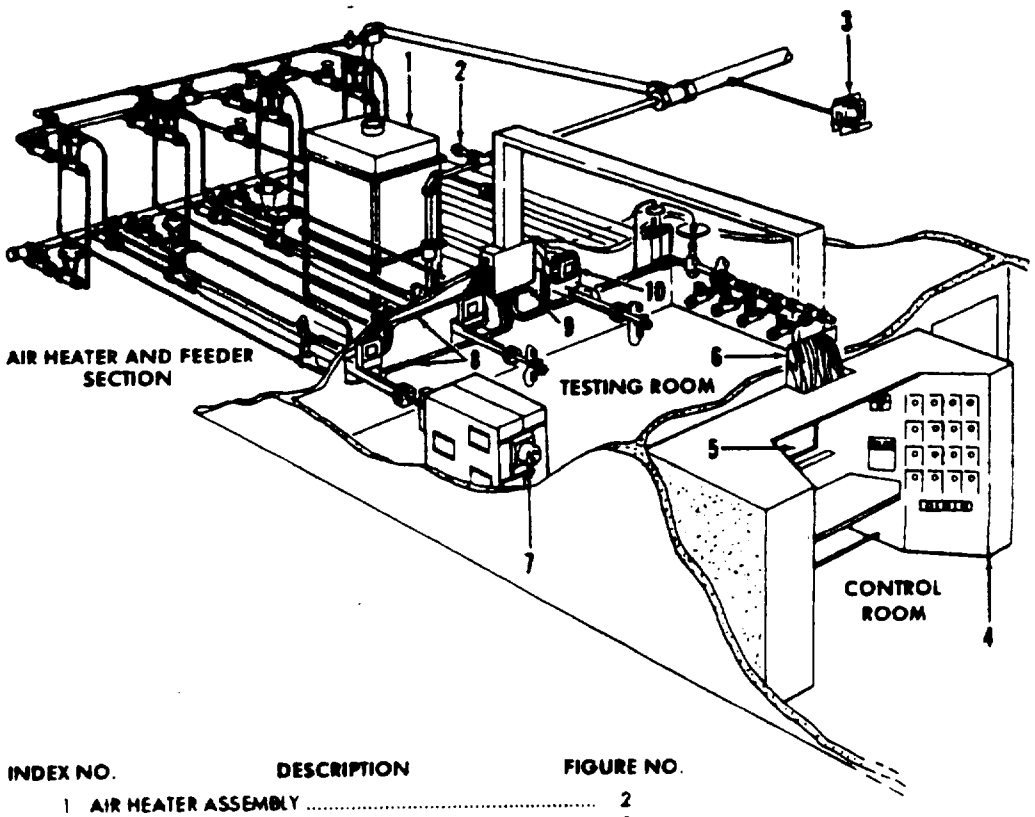
Figure 5. Typical Exploded View of Accessory Equipment



INDEX NO.	DESCRIPTION	FIGURE NO.
1	POWER SECTION	2 THRU 6
2	COMPRESSOR	7 THRU 11
3	ACCESSORY DRIVE	12 THRU 16
4	TURBINE	17 THRU 20
5	FUEL SYSTEM	21 THRU 23
6	ELECTRICAL SYSTEM	24 THRU 26
7	CONTROL SYSTEM	27 THRU 29
8	TORQUEMETER	50 THRU 51
9	REDUCTION GEAR	52 THRU 66

Figure 1. Exploded View of Complete Engine

Figure 6. Typical Exploded View of Complete Engine (Main Groups)

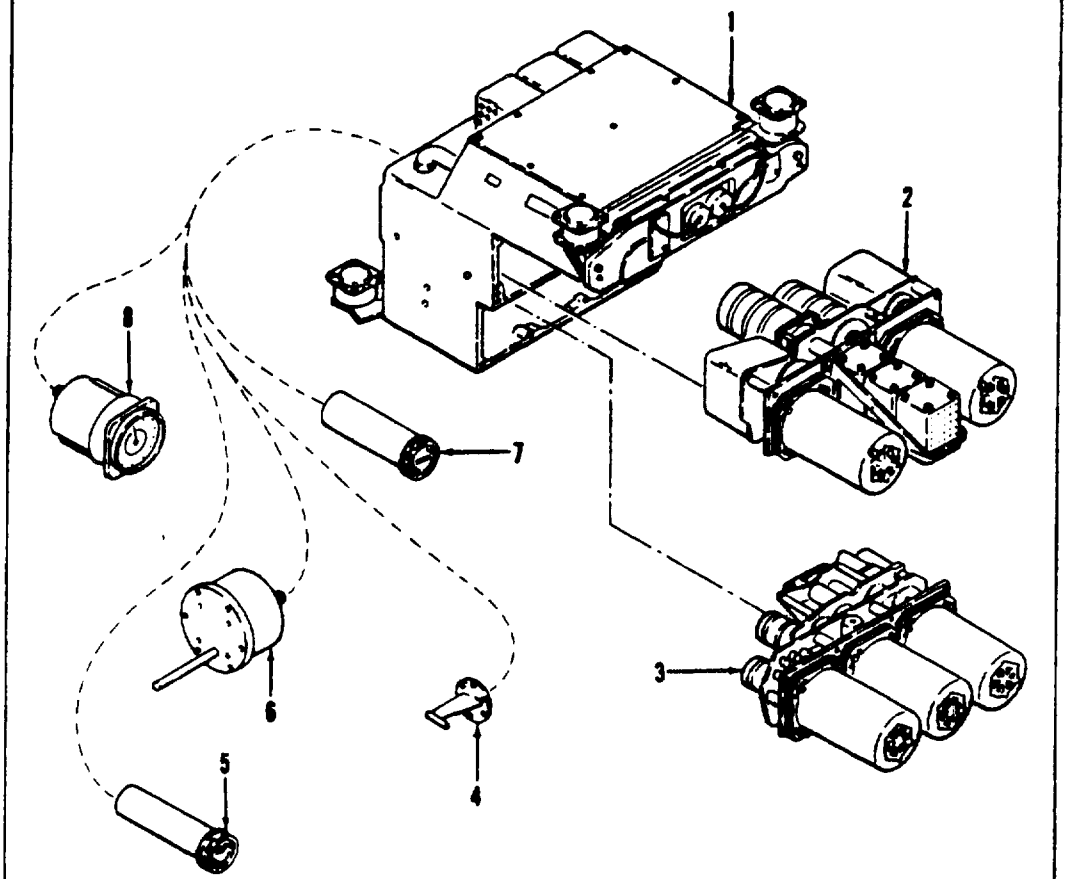


INDEX NO.	DESCRIPTION	FIGURE NO.
1	AIR HEATER ASSEMBLY	2
2	PLUMBING INSTALLATION	5
3	MOISTURE CONTENT MEASUREMENT SYSTEM	8
4	REMOTE CONTROL AND MEASUREMENT FACILITY	11
5	SAFETY GLASS INSTALLATION	12
6	INSTRUMENTATION BULKHEAD	14
7	REFRIGERATION UNIT FACILITIES	15
8	CONTROL AND MEASUREMENT CABLES	18
9	JUNCTION BOX	19
10	TERMINAL BOX	20

Figure 1 Air Turbine Test Facility

2-1

Figure 7. Typical Exploded View of Real Property Installed Equipment (System)

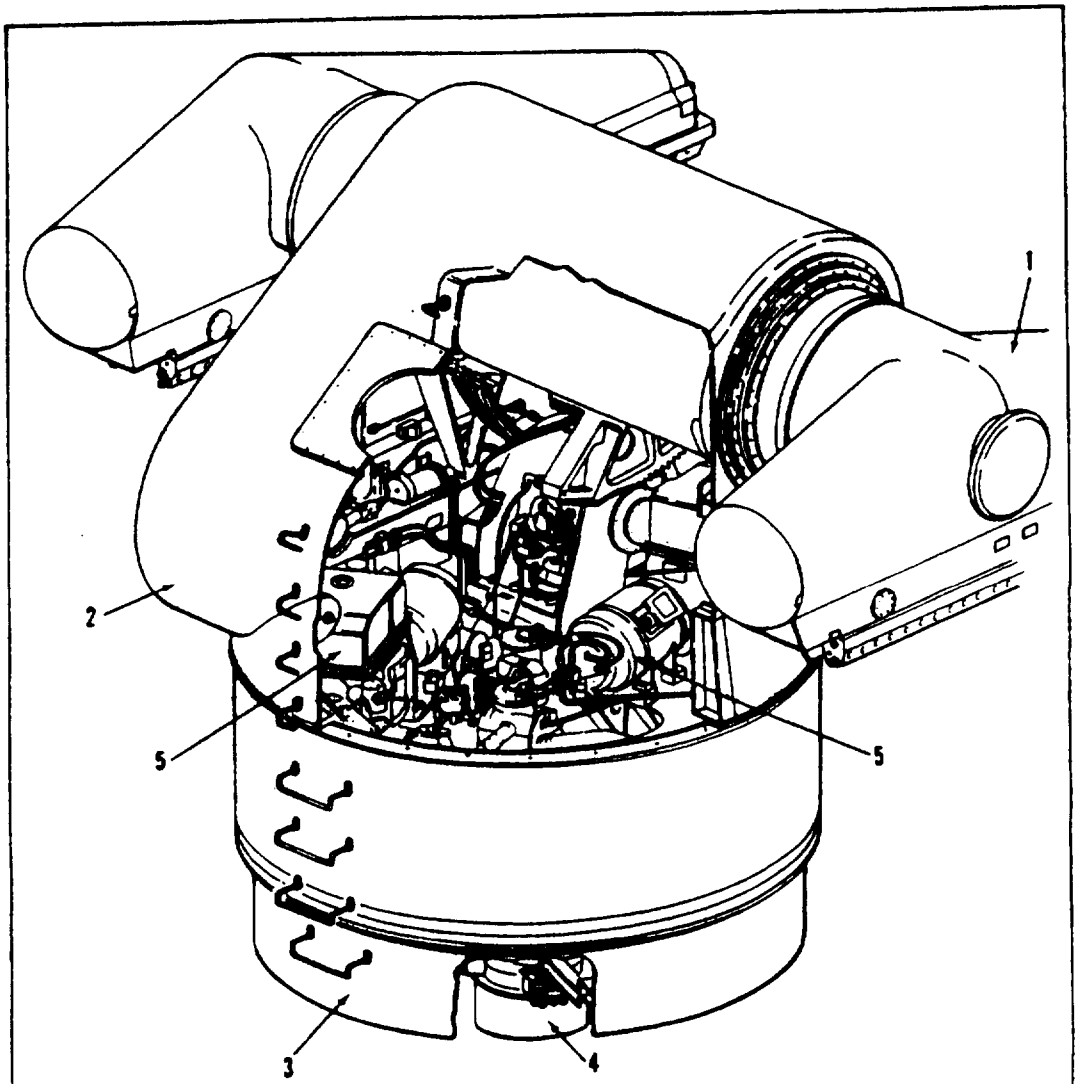


INDEX NO.	DESCRIPTION	FIGURE NO.
1	CENTRAL AIR DATA COMPUTER	2
2	TRUE MACH UNIT	4
3	TRUE ALTITUDE UNIT	7
4	TEMPERATURE SENSOR	10
5	TRUE AIR SPEED AND GROUND SPEED INDICATOR	11
6	AIRSTREAM DIRECTION TRANSDUCER	12
7	BAROMETRIC AND RADAR ALTITUDE INDICATOR	13
8	AIRSPEED AND MACH NUMBER INDICATOR	14

Figure 1. Central Air Data Computer System

2-1

Figure 8. Typical Exploded View of Electronic Equipment (System)



INDEX NO.	DESCRIPTION	FIGURE NO.
1	GUIDE ASSEMBLY	2
2	CARRIAGE ASSEMBLY	21
3	STAND ASSEMBLY	34
4	SLIP RING ASSEMBLY	38
5	TRAIN AND ELEVATION POWER DRIVE ASSEMBLIES	50

Figure 1. MK 00 Launcher

2-1

Figure 9. Typical View of Armament Equipment (System)

FIGURE & INDEX NO	PART NO	1 2 3 4 5 6 7 DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		SPEED BRAKES		
59	760217L	FLAP INSTL LH DIVE BRAKE (SEE FIG 283 FOR NHA	1	
59	760217H	FLAP INSTL RH DIVE BRAKE (SEE FIG 283 FOR NHA)	1	
59- 1	761752	YOKE ASSY DIVE FLAP	1	
		(ATTACHING PARTS)		
59- 2	AN381-3-20	PIN (KFP)	1	
59- 3	AN310-8	NUT	1	
59- 4	726223	WASHER DIVE FLAP (KF)	1	
59- 5	726224	WASHER DIVE FLAP YOKE (KF)	2	
59- 6	726226-3	SPACER DIVE FLAP (KF)	2	
59- 7	726226-4	SPACER DIVE FLAP (KF)	2	
59- 8	726231	BOLT DIVE FLAP	1	
		.....		
59-	761787-3	YOKE DIVE FLAP	1	
59- 9	726079-3	BUSHING DIVE FLAP	2	
59- 10	MS18001-1	FITTING (KFP)	2	
59- 11	726229	LOCK DIVE FLAP YOKE PIN	2	
		(ATTACHING PARTS)		
59	NAS679A3	NUT (KFP)	2	
59	AN960D1C	WASHER (KFP)	2	
59	NAS623-3-5	SCREW (KFP)	2	
		.....		
59- 12	726230	PIN DIVE FLAP YOKE	2	
59- 13	726228	LOCK DIVE FLAP CYL PIN	1	
		(ATTACHING PARTS)		
59-	NAS679A3	NUT (KFP)	1	
59-	AN960D10	WASHER (KFP)	1	
59-	NAS623-3-8	SCREW (KFP)	1	
		.....		
59 14	726227	PIN DIVE FLAP CYL	1	
59- 15	760217-3L	FLAP ASSY LH DIVE (PARTS KITS AVAILABLE)	1	
59	760217-3R	FLAP ASSY RH DIVE (PARTS KITS AVAILABLE)	1	
59- 16	750370	ROLLER DIVE FLAP TRACK (KDF USE UNTIL EXHAUSTED)	2	AA
59-	760646-1L	ROLLER DIVE FLAP TRACK (ALTERNATE FOR 750370)	2	AM
		(ATTACHING PARTS)		
59- 17	AN364-1216	NUT (KBP)	2	
59- 18	AN960D1216	WASHER (KBP)	2	
59- 19	NAS680-1216	WASHER (KBP)	2	
59- 20	726226	SPACER TRACK ROLLER (KF)	2	
		.....		
59- 21	762345L	FRAME ASSY LH DIVE FLAP	1	
59-	762345R	FRAME ASSY RH DIVE FLAP	1	
59- 22	726267-3	BUSHING DIVE FLAP FRAME (KD)	2	
59- 23	726267-4	BUSHING DIVE FLAP FRAME (KD)	2	
59 24	MS18001-1	FITTING (KFP)	4	
59-	ASCT90PT6-2	LOCKBOLT 1298661 (KD)	38	
59-	ASCT909T6-5	LOCKBOLT 1298661 (KD)	23	AD
59-	ASCT909T6-4	LOCKBOLT 1298661 (KD)	38	K
59- 25	MS18001-4	FITTING (KBP)	1	
59-	AN7510-2	NAMEPLATE (KBP)	1	
59-	216530-1	PARTS KIT DIVE FLAP ASSY FIELD	1	
59-	216520-3	PARTS KIT DIVE FLAP ASSY OVERHAUL LH	1	
59-	216520-4	PARTS KIT DIVE FLAP ASSY OVERHAUL RH	1	
59-	762162L	CYLINDER INSTL DIVE FLAP LH (SEE FIG 283 FOR NHA)	1	
59-	762162R	CYLINDER INSTL DIVE FLAP RH (SEE FIG 283 FOR NHA)	1	
59- 26	7551	DIVE FLAP ACTUATING (LOCKHEED 10001 (7839 ALTERNATE FOR 7551 LOCKHEED SPEC 660000-31 (SEE T O 9H2-4-63-241)	1	AA
		(ATTACHING PARTS)		
59-	AN381-3-24	PIN	2	
59-	AN320-8	NUT	2	
59-	AN960D816	WASHER (2 USED WITH NAS1106-16D)	2	
59- 27	NAS1106-16D	BOLT	1	
59- 28	NAS1106-28D	BOLT	1	
		.....		

PARA 3.5.1.5.2

PARA 3.5.1.4.4.13

PARA 3.5.1.5.3

PARA 3.5.1.8.2

(EXAMPLE OF EAM EQUIPMENT PREPARATION)

Figure 10. Typical Group Assembly Parts List (Visual Indention)

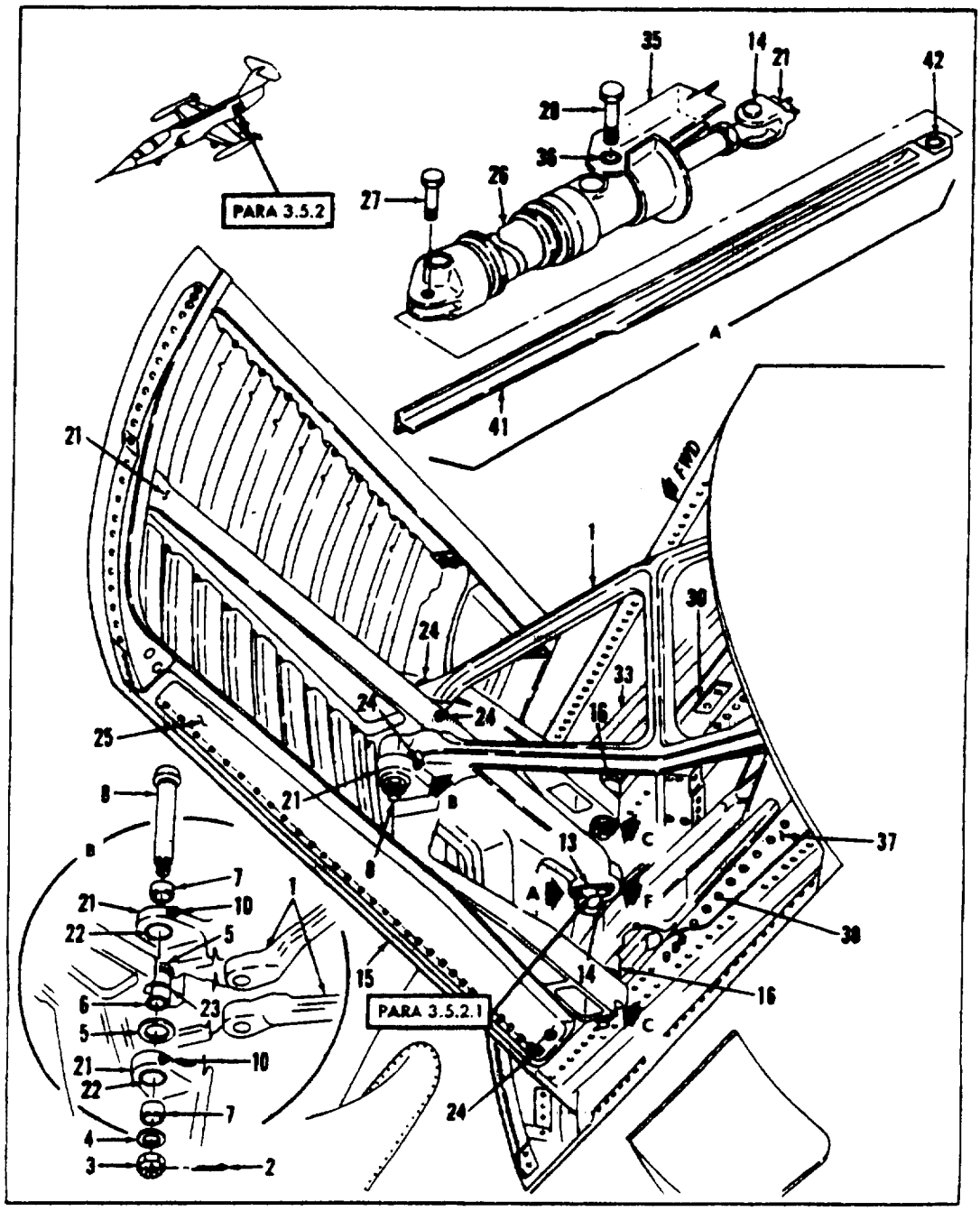


Figure 59. Speed Brakes (Sheet 1 of 2)

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Figure 11. Typical Illustration (Sheet 1 of 2)

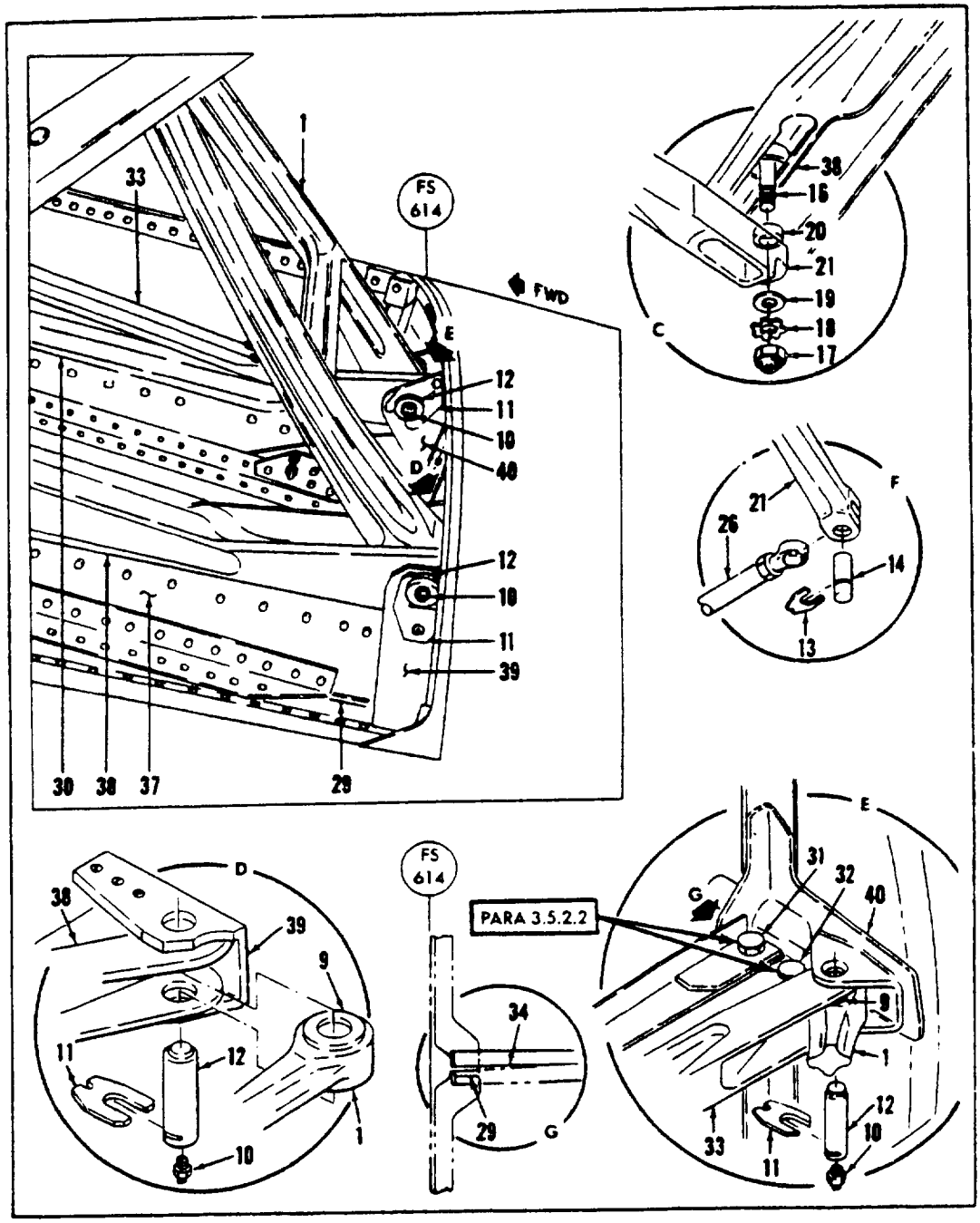

Figure 59. Speed Brakes (Sheet 2 of 2)

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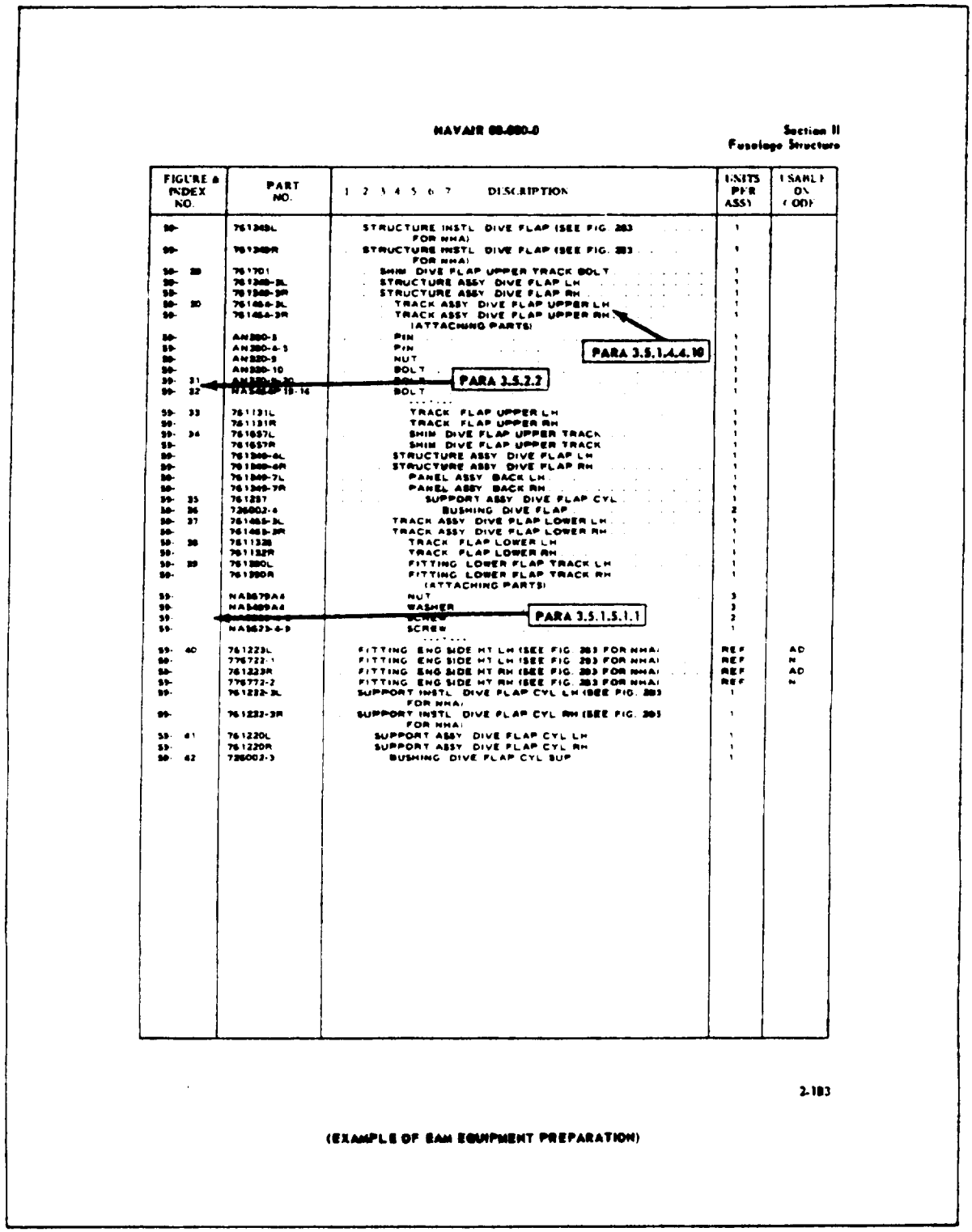
Figure 11. Typical Illustration (Sheet 2 of 2)



(EXAMPLE OF EAM EQUIPMENT PREPARATION)

Figure 12. Typical Group Assembly Parts List (Visual Indention)

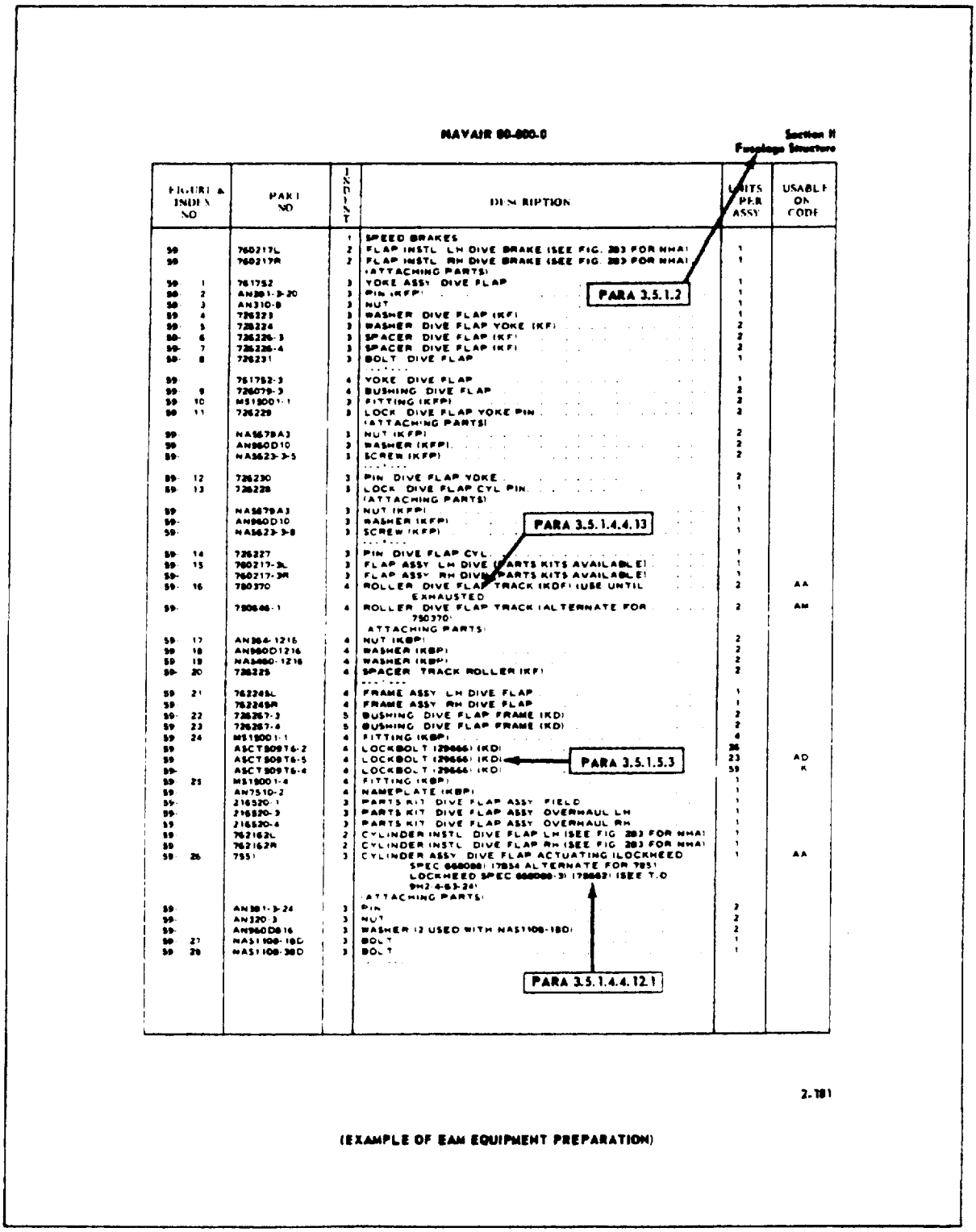


FIGURE & INDEX NO	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1	SPEED BRAKES		
59	760217L	2	FLAP INSTL LH DIVE BRAKE (SEE FIG. 283 FOR NHA)	1	
59	760217R	2	FLAP INSTL RH DIVE BRAKE (SEE FIG. 283 FOR NHA)	1	
			(ATTACHING PARTS)		
59 1	761752	3	YOKE ASSY DIVE FLAP	1	
59 2	AN381-3-20	3	PIN (KFP)	1	
59 3	AN310-8	3	NUT	1	
59 4	726223	3	WASHER DIVE FLAP (KF)	1	
59 5	726224	3	WASHER DIVE FLAP YOKE (KF)	2	
59 6	726226-3	3	SPACER DIVE FLAP (KF)	2	
59 7	726226-4	3	SPACER DIVE FLAP (KF)	2	
59 8	726231	3	BOLT DIVE FLAP	1	
			.....		
59	761752-3	4	YOKE DIVE FLAP	1	
59 9	726079-3	4	BUSHING DIVE FLAP	2	
59 10	MS18001-1	3	FITTING (KFP)	2	
59 11	726229	3	LOCK DIVE FLAP YOKE PIN	2	
			(ATTACHING PARTS)		
59	NAS679A3	3	NUT (KFP)	2	
59	AN960D10	3	WASHER (KFP)	2	
59	NAS623-3-5	3	SCREW (KFP)	2	
			.....		
59 12	726230	3	PIN DIVE FLAP YOKE	2	
59 13	726228	3	LOCK DIVE FLAP CYL PIN	1	
			(ATTACHING PARTS)		
59	NAS679A3	3	NUT (KFP)	1	
59	AN960D10	3	WASHER (KFP)	1	
59	NAS623-3-8	3	SCREW (KFP)	1	
			.....		
59 14	726227	3	PIN DIVE FLAP CYL	1	
59 15	760217-3L	3	FLAP ASSY LH DIVE (PARTS KITS AVAILABLE)	1	
59	760217-3R	3	FLAP ASSY RH DIVE (PARTS KITS AVAILABLE)	1	
59 16	780370	4	ROLLER DIVE FLAP TRACK (KDF) (USE UNTIL EXHAUSTED	2	AA
59	780646-1	4	ROLLER DIVE FLAP TRACK (ALTERNATE FOR 780370)	2	AM
			ATTACHING PARTS)		
59 17	AN364-1216	4	NUT (KBP)	2	
59 18	AN960D1216	4	WASHER (KBP)	2	
59 19	NAS460-1216	4	WASHER (KBP)	2	
59 20	726225	4	SPACER TRACK ROLLER (KF)	2	
			.....		
59 21	762245L	4	FRAME ASSY LH DIVE FLAP	1	
59	762245R	4	FRAME ASSY RH DIVE FLAP	1	
59 22	726267-3	5	BUSHING DIVE FLAP FRAME (KD)	2	
59 23	726267-4	5	BUSHING DIVE FLAP FRAME (KD)	2	
59 24	MS18001-1	4	FITTING (KBP)	4	
59	ASCT809T6-2	4	LOCKBOLT (290666) (KD)	35	
59	ASCT809T6-5	4	LOCKBOLT (290666) (KD)	23	AD
59	ASCT809T6-4	4	LOCKBOLT (290666) (KD)	59	K
59 25	MS18001-4	4	FITTING (KBP)	1	
59	AN7510-2	4	NAMEPLATE (KBP)	1	
59	216520-1	3	PARTS KIT DIVE FLAP ASSY FIELD	1	
59	216520-3	3	PARTS KIT DIVE FLAP ASSY OVERHAUL LH	1	
59	216520-4	3	PARTS KIT DIVE FLAP ASSY OVERHAUL RH	1	
59	762162L	2	CYLINDER INSTL DIVE FLAP LH (SEE FIG 283 FOR NHA)	1	
59	762162R	2	CYLINDER INSTL DIVE FLAP RH (SEE FIG 283 FOR NHA)	1	
59 26	7551	3	CYLINDER ASSY DIVE FLAP ACTUATING (LOCKHEED SPEC 660088) (7854 ALTERNATE FOR 7851 LOCKHEED SPEC 660088-3) (78662) (SEE T.O 9H2-4-63-24)	1	AA
			(ATTACHING PARTS)		
59	AN381-3-24	3	PIN	2	
59	AN320-3	3	NUT	2	
59	AN960D816	3	WASHER (2 USED WITH NAS1108-18D)	2	
59 27	NAS1108-18D	3	BOLT	1	
59 28	NAS1108-38D	3	BOLT	1	

(EXAMPLE OF EAM EQUIPMENT PREPARATION)

Figure 13. Typical Group Assembly Parts List (Coded Indention)

FIGURE & INDEX NO	PART NO	I/DENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
59- 28	761349L	2	STRUCTURE INSTL DIVE FLAP (SEE FIG. 283 FOR NHA)	1	
59-	761349R	2	STRUCTURE INSTL DIVE FLAP (SEE FIG 283 FOR NHA)	1	
59- 29	761701	3	SHIM DIVE FLAP UPPER TRACK BOLT	1	
59	761349-3L	3	STRUCTURE ASSY DIVE FLAP LH	1	
59	761349-3R	3	STRUCTURE ASSY DIVE FLAP RH	1	
59- 30	761464-3L	4	TRACK ASSY DIVE FLAP UPPER LH	1	
59-	761464-3R	4	TRACK ASSY DIVE FLAP UPPER RH	1	
			(ATTACHING PARTS)		
59	AN380-3-5	4	PIN	1	
59-	AN380-4-5	4	PIN	1	
59-	AN320-8	4	NUT	1	
59-	AN320-10	4	NUT	1	
59 31	NAS6604P6-10	4	BOLT	1	
59- 32	NAS6604P10-16	4	BOLT	1	
59- 33	761131L	5	TRACK FLAP UPPER LH	1	
59-	761131R	5	TRACK FLAP UPPER RH	1	
59 34	761657L	5	SHIM DIVE FLAP UPPER TRACK	1	
59-	761657R	5	SHIM DIVE FLAP UPPER TRACK	1	
59	761349-4L	6	STRUCTURE ASSY DIVE FLAP LH	1	
59-	761349-4R	6	STRUCTURE ASSY DIVE FLAP RH	1	
59-	761349-7L	5	PANEL ASSY BACK LH	1	
59-	761349-7R	5	PANEL ASSY BACK RH	1	
59 35	761257	6	SUPPORT ASSY DIVE FLAP CYL	1	
59 36	726002-4	7	BUSHING DIVE FLAP	2	
59 37	761465-3L	6	TRACK ASSY DIVE FLAP LOWER LH	1	
59	761465-3R	6	TRACK ASSY DIVE FLAP LOWER RH	1	
59 38	761132L	5	TRACK FLAP LOWER LH	1	
59-	761132R	5	TRACK FLAP LOWER RH	1	
59 39	761390L	5	FITTING LOWER FLAP TRACK LH	1	
59-	761390R	5	FITTING LOWER FLAP TRACK RH	1	
			(ATTACHING PARTS)		
59	MA5679A6	5	NUT	3	
59	AN960D6	5	WASHER	3	
59	MA5623-6-5	5	SCREW	2	
59	MA5623-6-9	5	SCREW	1	
59- 40	761223L	2	FITTING ENG SIDE MT LH (SEE FIG. 283 FOR NHA)	REF	AD
59-	776722-1	2	FITTING ENG SIDE MT LH (SEE FIG 283 FOR NHA)	REF	N
59-	761223R	2	FITTING ENG SIDE MT RH (SEE FIG. 283 FOR NHA)	REF	AD
59-	776772-2	2	FITTING ENG SIDE MT RH (SEE FIG. 283 FOR NHA)	REF	N
59-	761222-3L	2	SUPPORT INSTL DIVE FLAP CYL LH (SEE FIG 283 FOR NHA)	1	
59-	761222-3R	2	SUPPORT INSTL DIVE FLAP CYL RH (SEE FIG 283 FOR NHA)	1	
59- 41	761220L	3	SUPPORT ASSY DIVE FLAP CYL LH	1	
59-	761220R	3	SUPPORT ASSY DIVE FLAP CYL RH	1	
59- 42	726002-3	4	BUSHING DIVE FLAP CYL SUP	1	

PARA 3.5.1.10

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(EXAMPLE OF EAM EQUIPMENT PREPARATION)

Figure 14. Typical Group Assembly Parts List (Coded Indention)

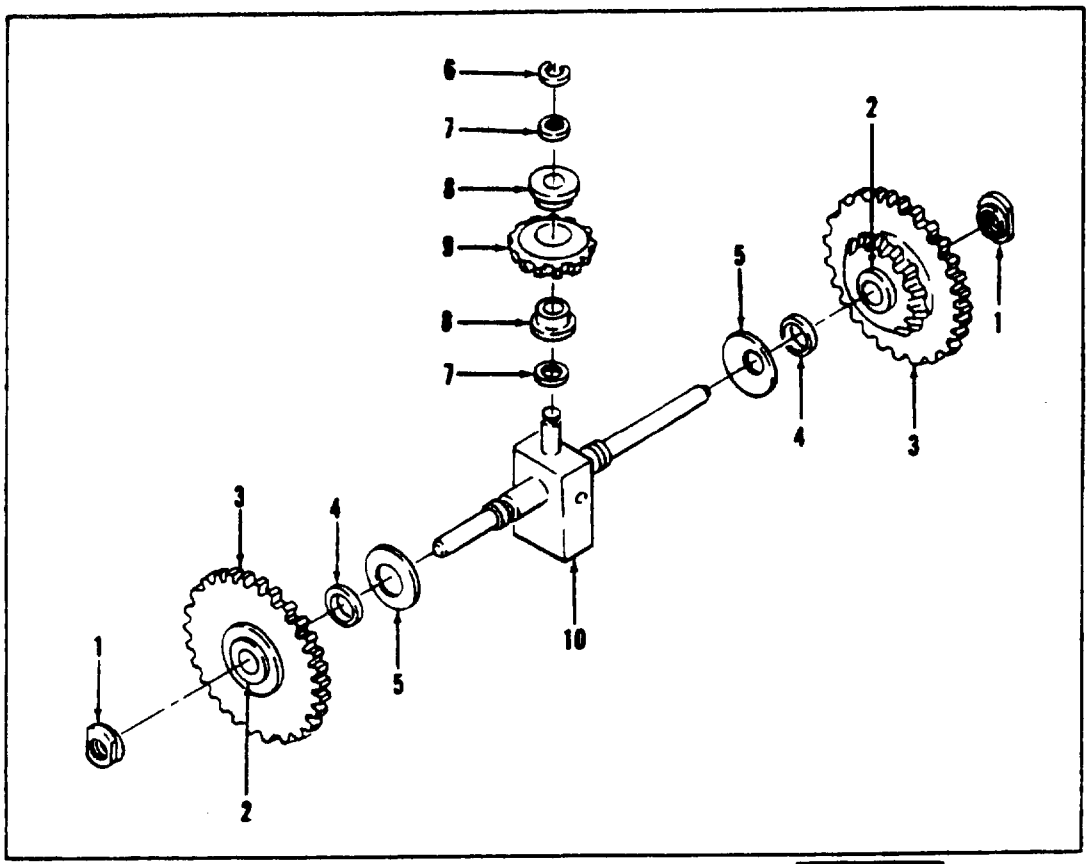

Figure 9. Mechanical Differential ← PARA 3.5.2.8

FIGURE & INDEX NUMBER	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON MK	USABLE ON MOD
9	423422-1	DIFFERENTIAL, Mechanical (see fig. 4 for NHA)	Ref	16	1
	423424-1	DIFFERENTIAL, Mechanical (see fig. 4 for NHA)	Ref	16	2
-1	123263	NUT, Plain, round	2		
-2	MFB1250C1S	BEARING, Ball, annular ... PARA 3.5.1.10	4		
-3	224853	BEVEL GEAR	2		
-4	128476	SPACER, Sleeve	2		
-5	128475	WASHER, Spring tension	2		
	231920	SHAFT AND SPIDER GEAR ASSEMBLY	1	16	1
	231930	SHAFT AND SPIDER GEAR ASSEMBLY	1	16	2
-6	5133-12	RING, Retaining (79136)	1		
-7	126741-1	SHIM, 0.002 in. oversize	AR		
	126741-2	SHIM, 0.004 in. oversize	AR		
	126741-3	SHIM, 0.005 in. oversize	AR		
	126741-4	SHIM, 0.007 in. oversize ... PARA 3.5.1.9	AR		
	126741-5	SHIM, 9.010 in. oversize	AR		
-8	MFB85C1S	BEARING, Ball, annular	2		
-9	323979	GEAR, Bevel	1	16	1
	323989	GEAR, Bevel	1	16	2
-10	331919	SHAFT AND POST ASSEMBLY (Welded)	1		

PARA 3.5.1.4.4.1

(EXAMPLE OF COMPOSING MACHINE PREPARATION)

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Figure 15. Typical Illustration with Group Assembly Parts List

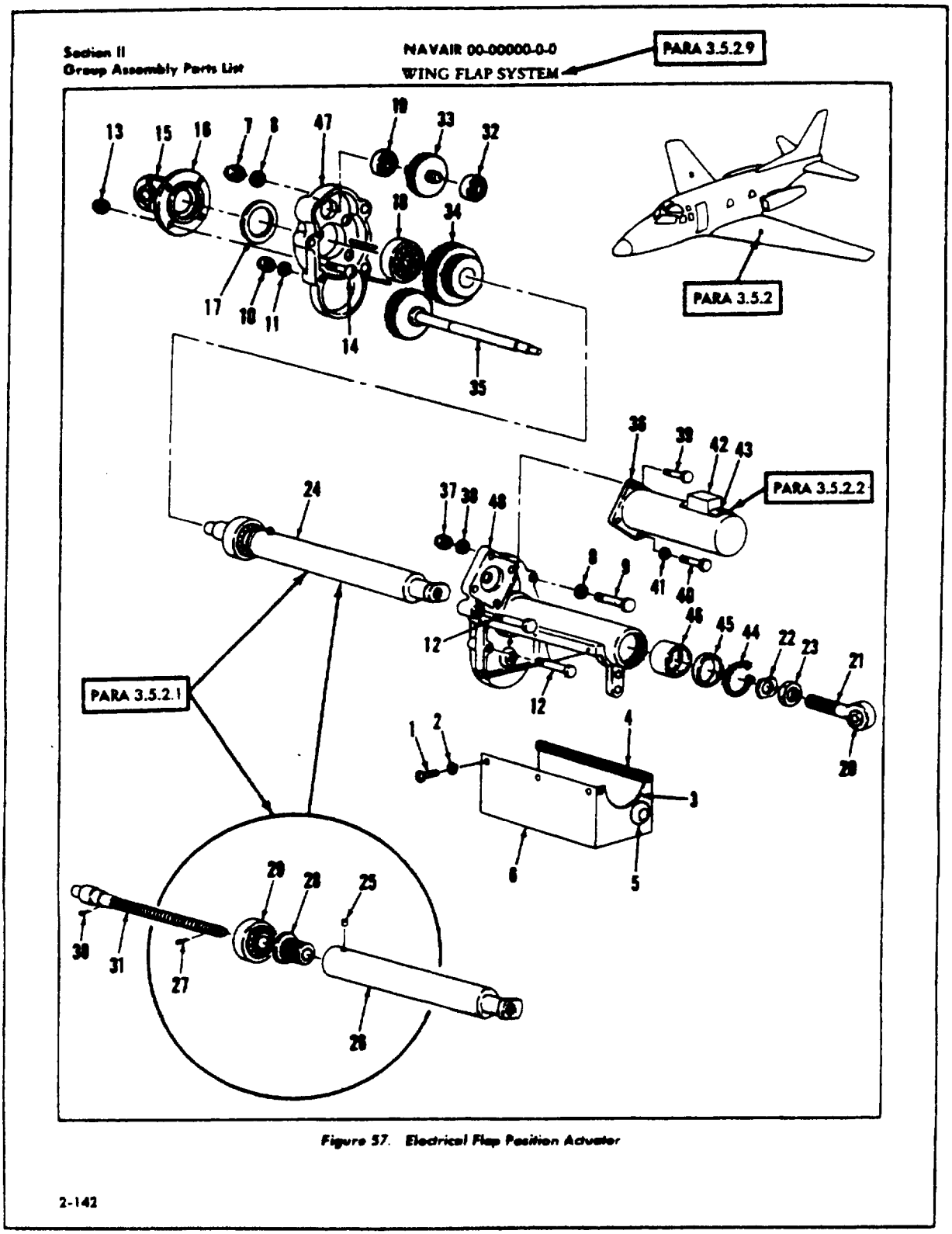

Figure 57. Electrical Flap Position Actuator

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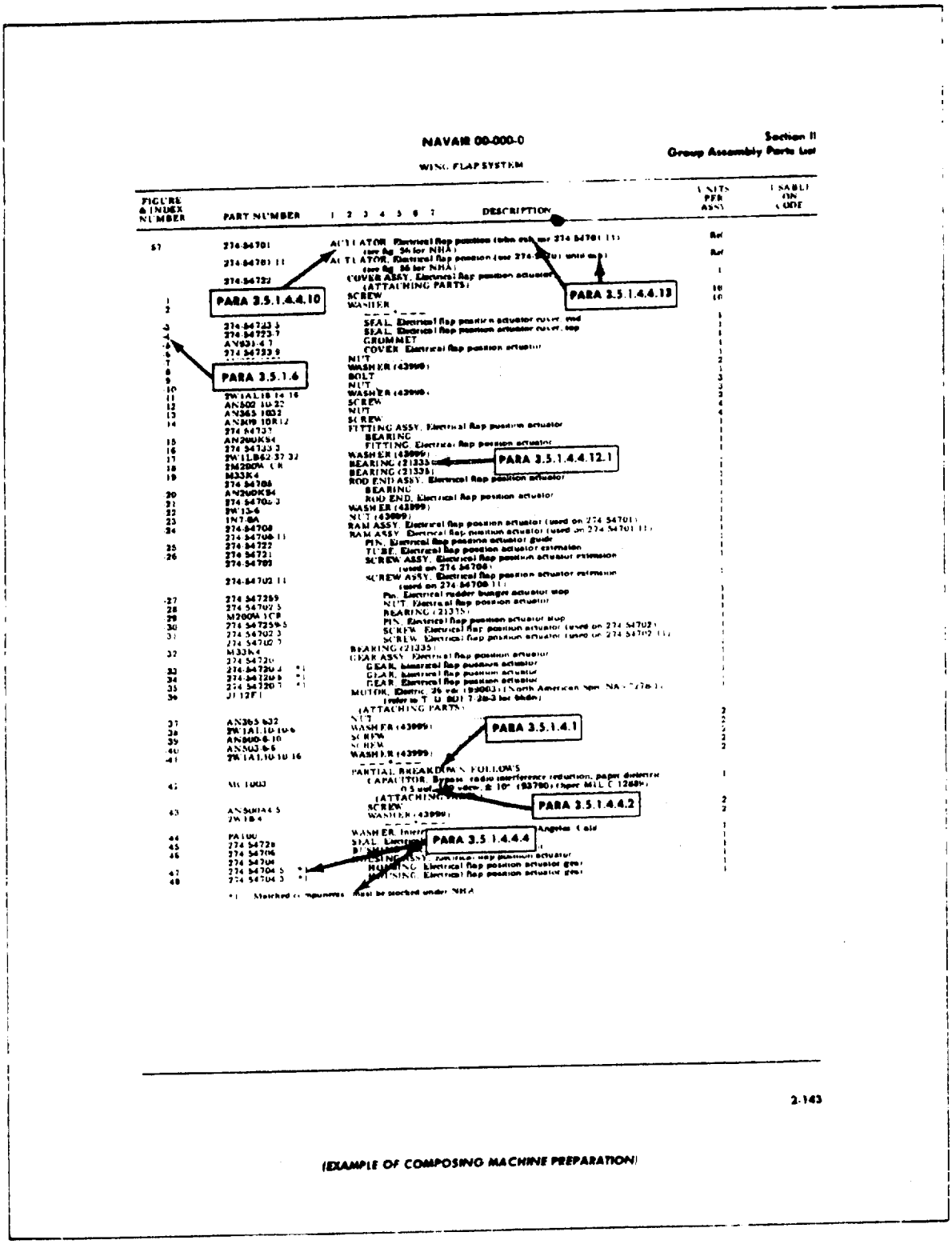
Figure 16. Typical Illustration



(EXAMPLE OF COMPOSING MACHINE PREPARATION)

Figure 17. Typical Group Assembly Parts List

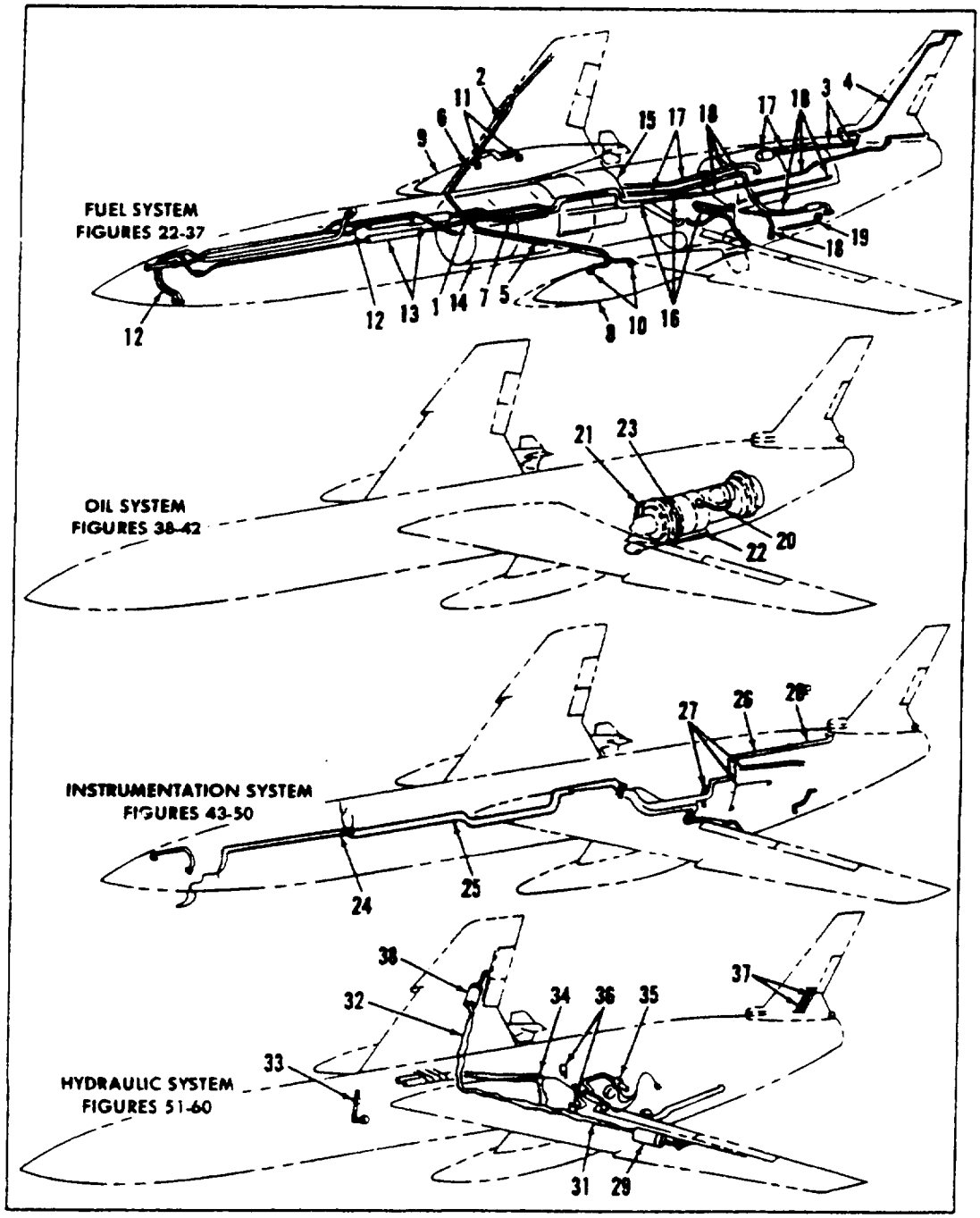


Figure 21. Fluid Systems

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Figure 18. Typical Illustration (Airframe Systems)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7 DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
31-		FUEL SYSTEM		
1	5160563-1	SYSTEM INSTL. Wing complete fuel (see fig. 4 for NHA) (see fig. 29 for details)	REF	
2	5162288-1	PLUMBING INSTL. Pylon to wing tip fuel (see fig. 4 for NHA) (see fig. 29 for details)	REF	
3	5160141-503	PLUMBING INSTL. Fuselage Sta 751.000 aft fuel (see fig. 6 for NHA) (see fig. 29 for details)	REF	
4	5147783-1	TUBE INSTL. Vertical stabilizer fuel vent (see fig. 10 for NHA) (see fig. 29 for details)	REF	
5	5160801-1	PLUMBING INSTL. Inboard leading edge outer wing fuel LH (see fig. 4 for NHA) (see fig. 34 for details)	REF	
6	5160801-2	PLUMBING INSTL. Inboard leading edge outer wing fuel RH (see fig. 4 for NHA) (see fig. 34 for details)	REF	
7	51813947-1	PLUMBING INSTL. Wing drain & breakaway fuel (see fig. 4 for NHA) (see fig. 29 for details)	REF	
8	5147436-501	TANK ASSY. Complete pylon LH (see fig. 5 for NHA) (see fig. 36 for details)	REF	
9	5147436-502	TANK ASSY. Complete pylon RH (see fig. 5 for NHA) (see fig. 36 for details)	REF	A1-A3
	5147436-504	TANK ASSY. Complete pylon RH (see fig. 5 for NHA) (see fig. 36 for details)	REF	A1 & Subs
10	5162537-1	PLUMBING INSTL. Pylon fuel LH (see fig. 5 for NHA) (see fig. 27 for details)	REF	
11	5162537-2	PLUMBING INSTL. Pylon fuel RH (see fig. 5 for NHA) (see fig. for details)	REF	
12	5162540-1	SYSTEM INSTL. Fuselage Sta 108.000 to 283.000 forward fuel (see fig. 6 for NHA) (see fig. 28 for details)	REF	
13	5162541-1	SYSTEM INSTL. Fuselage Sta 283.000 to 371.000 forward section fuel (see fig. 6 for NHA) (see fig. 29 & 30 for details)	REF	
14	5162542-1	CELL INSTL. Fuselage Sta 384.000 to 484.000 fuel (see fig. 6 for NHA) (see fig. 31 for details)	REF	
15	5162543-1	CELL INSTL. Fuselage Sta 484.000 to 604.000 fuel (see fig. 6 for NHA) (see fig. 32 for details)	REF	
16	5162544-1	PLUMBING INSTL. Fuselage Sta 484.000 to 600 000 fuel (see fig. 6 for NHA) (see fig. 33 for details)	REF	
17	5162545-1	CELL INSTL. Fuselage Sta 604.000 to 708.000 fuel (see fig. 6 for NHA) (see fig. 34 & 35 for details)	REF	
18	5162546-1	PLUMBING INSTL. Fuselage Sta 600.000 to 761 000 fuel (see fig. 6 for NHA) (see fig. 36 for details)	REF	A1-A41
	5165781-1	PLUMBING INSTL. Fuselage Sta 600.000 to 761 000 fuel (see fig. 6 for NHA) (see fig. 36 for details)	REF	A42 & Subs
19	5163484-501	SYSTEM INSTL. Engine mounted fuel (see fig. 14 for NHA) (see fig. 37 for details)	REF	
		OIL SYSTEM		
20	5163482-1	SYSTEM INSTL. J57P17 Engine oil lubrication (see fig. 14 for NHA) (see fig. 38 for details)	REF	
21	5163881-507	SYSTEM INSTL. 60 Kilowatt-ampere hydraulic and drive oil (see fig. 14 for NHA) (see fig. 39 & 40 for details)	REF	A1-A13
	5163880-1	SYSTEM INSTL. 60 Kilowatt-ampere constant speed drive oil (see fig. 14 for NHA) (see fig. 39 & 40 for details)	REF	A14 & Subs
22	5163483-1	COOLER INSTL. Air engine oil (see fig. 14 for NHA) (see fig. 41 for details)	REF	
23	5163881-505	SYSTEM INSTL. Engine breather & vents (see fig. 14 for NHA) (see fig. 43 for details)	REF	
		INSTRUMENTATION LINES		
24	5161985-1	LINE INSTL. Nose instrument (see fig. 6 for NHA) (see fig. 43 for details)	REF	A1-A13
	5161985-501	LINE INSTL. Nose instrument (see fig. 6 for NHA) (see fig. 44 for details)	REF	A14 & Subs
25	5161986-1	LINE INSTL. Fuselage forward main instrument (see fig. 6 for NHA) (see fig. 45 & 46 for details)	REF	
26	5163881-501	LINE INSTL. Fuselage Sta. 647.500 to 761.150 LH wiring instrument (see fig. 6 for NHA) (see fig. 47 for details)	REF	
27	5161986-1	LINE INSTL. Aft main instruments (see fig. 10 for NHA) (see fig. 46 & 48 for details)	REF	
28	5161986-1	LINE INSTL. Fuselage instrumentation (see fig. 10 for NHA) (see fig. 50 for details)	REF	
		HYDRAULIC SYSTEM		
29	5161760-1	HYDRAULIC INSTL. Outer wing LH (see fig. 4 for NHA) (see fig. 51 & 53 for details)	REF	
30	5161760-2	HYDRAULIC INSTL. Outer wing RH (see fig. 4 for NHA) (see fig. 51 & 53 for details)	REF	
31	5162250-501	HYDRAULIC INSTL. Outer wing inboard trailing section LH (see fig. 4 for NHA) (see fig. 51 & 53 for details)	REF	A1-A13
32	5162250-502	HYDRAULIC INSTL. Outer wing inboard trailing section RH (see fig. 4 for NHA) (see fig. 51 & 53 for details)	REF	A1-A13
33	5160484-503	HYDRAULIC INSTL. Nose system (see fig. 6 for NHA) (see fig. 53 for details)	REF	
34	5161760-1	SYSTEM INSTL. Forward fuselage hydraulic (see fig. 8 for NHA) (see fig. 54 & 56 for details)	REF	
35	5161762-1	HYDRAULIC INSTL. Aft fuselage (see fig. 10 for NHA) (see fig. 56 & 57 for details)	REF	
36	5161764-1	HYDRAULIC INSTL. Jetavator control LH (see fig. 10 for NHA) (see fig. 54 & 58 for details)	REF	
	5161764-2	HYDRAULIC INSTL. Jetavator control RH (see fig. 10 for NHA) (see fig. 54 & 58 for details)	REF	
37	5162748-501	HYDRAULIC INSTL. Vertical stabilizer (see fig. 10 for NHA) (see fig. 60 for details)	REF	A1-A7

(EXAMPLE OF COMPOSING MACHINE PREPARATION)

Figure 19. Typical Group Assembly Parts List (Airframe Systems)

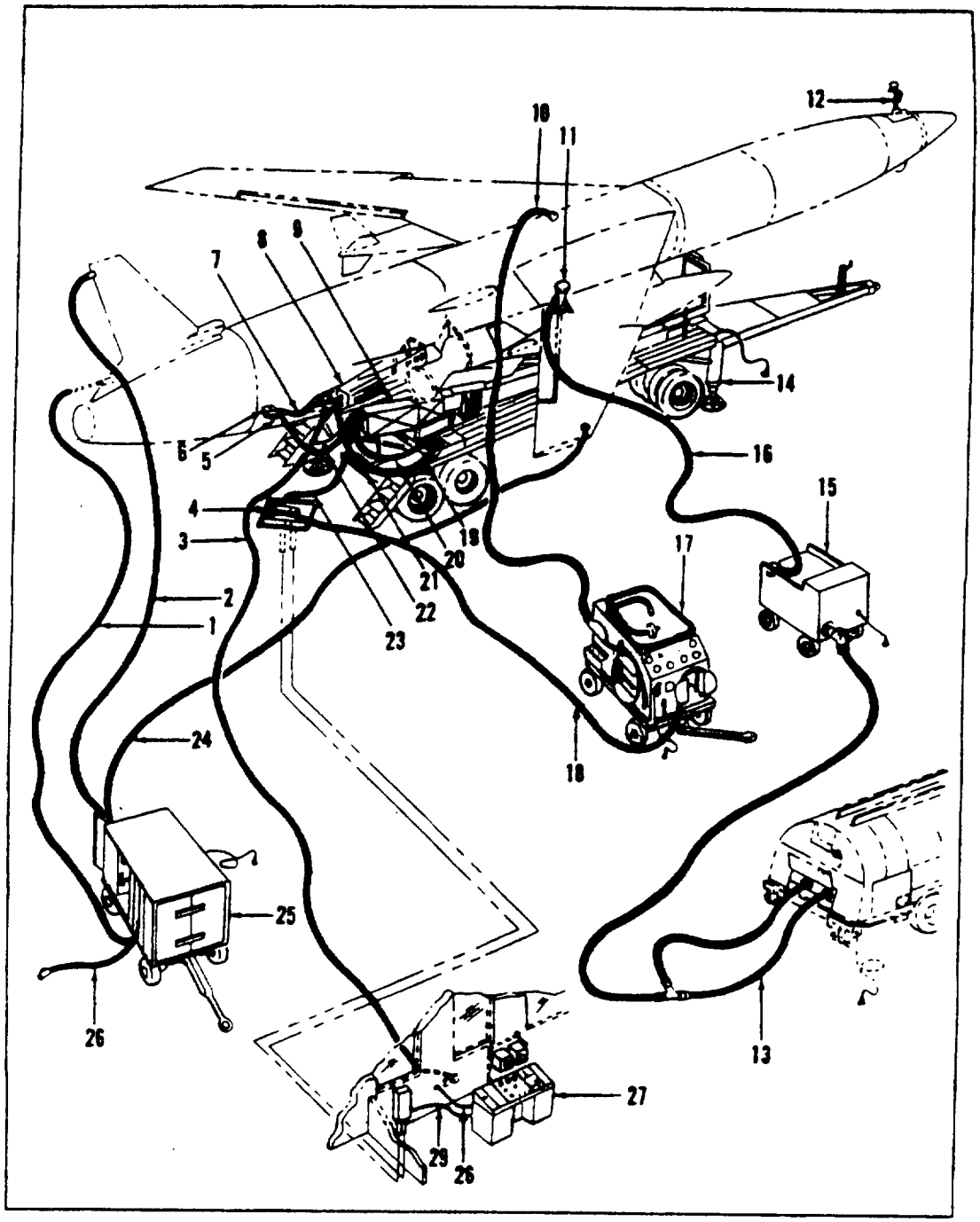

Figure 371. Operational Special Support Equipment (Missile Fueling)

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Figure 20. Typical Illustration (Operational Special Support Equipment)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7 DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
371- 1	[illegible]-34	HOSE ASSY, Fuel pump (12846) (see fig. 372 for details)	1	
2	[illegible]-16	HOSE, [illegible] (see fig. 372 for details)	1	
3	N31080-7	CABLE, Engine control	1	
4	N31780-5	SWITCH, Air pressure, fuel [illegible] system (see T. O. [illegible] for details)	1	
5	N27664-3	UMBILICAL, [illegible], No. 1 (see fig. 373 for details)	1	
6	N27664-5	UMBILICAL, [illegible], No. 2 (see fig. 373 for details)	1	
7	N28001-801	CABLE, Umbilical No. 1 & No. 2 (see fig. 373 for details)	1	
8	N33874-3	SWITCHBOX, AC (see T. O. [illegible] for details)	1	
9	N33874-5	SWITCHBOX, DC (see T. O. [illegible] for details)	1	
10	N17848-1	HOSE, Air, high pressure (see fig. 374 for details)	1	
11	[illegible]	NOZZLE, Fuel, single point (see fig. 375 for details)	1	
12	[illegible]	HOSE HARNESS AND [illegible] ASSY (see T. O. [illegible] for details)	1	
13	[illegible]-1	HOSE ASSY, F-8 Fuel supply (see fig. 375 for details)	1	
14	[illegible]-801	MOBILE LAUNCHER (see T. O. [illegible] for details)	1	
15	N18831-1	TRAILER, Fueling adapter (see T. O. [illegible] for details)	1	
16	[illegible]	FUEL LINE (see fig. 375 for details)	1	
17	[illegible]-1	TRAILER, Fuel system support (see T. O. [illegible] for details)	1	
18	[illegible]-3	HOSE, Air supply (see T. O. [illegible] for details)	1	
19	[illegible]-801	TEST SET, Fueling control (see T. O. [illegible] for details)	1	
20	N17784-1	CABLE ASSY, Special purpose, electrical, fueling [illegible] (see fig. 376 for details)	1	
21	N17787-1	CABLE ASSY, Special purpose, electrical, fueling [illegible] (see fig. 376 for details)	1	
22	[illegible]-801	CABLE ASSY, Special purpose, electrical, umbilical No. 1 (see fig. 376 for details)	1	
23	[illegible]-801	CABLE ASSY, Special purpose, electrical, [illegible] (see fig. 376 for details)	1	
24	[illegible]	HOSE, Fuel vent, right wing, cells 1A & 1F (see fig. 377 for details	1	
25	N18824-1	TRAILER, Test equipment, fuel system (see T. O. [illegible] for details)	1	
26	[illegible]-1003	HOSE, Test [illegible], fuel system (see fig. 377 for details)	1	
27	[illegible]-801	CONTROL CONSOLE, Engine (see T. O. [illegible] for details)	1	
28	[illegible]-5	CABLE, Engine console, lower cabinet (see fig. 376 for details)	1	
29	[illegible]-7	CABLE, Engine console, lower cabinet (see fig. 376 for details)	1	

(EXAMPLE OF COMPOSING MACHINE PREPARATION)

Figure 21. Typical Group Assembly Parts List (Operational Special Support Equipment)

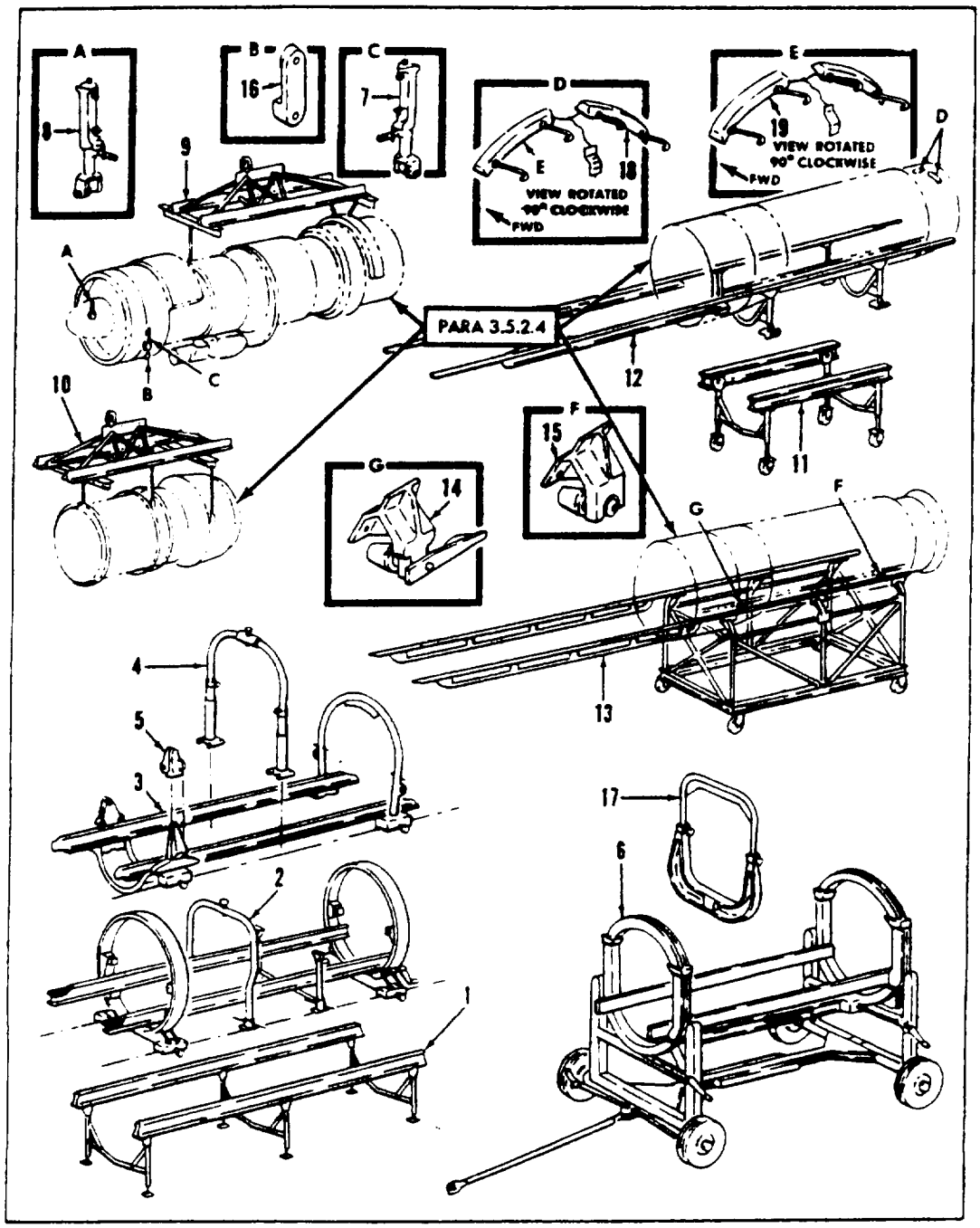

Figure 21. J75 Engine Special Support Equipment

Figure 22. Typical Illustration (Maintenance Special Support Equipment)

FIGURE & INDEX NO	PART NO	1 2 3 4 5 6 DESCRIPTION	UNITS PER ASSY	USABLE ON CODE FROM	USABLE ON CODE TO
21-		J75 ENGINE SPECIAL SUPPORT EQUIPMENT			
21- - 1	MMU4E	STAND ASSY ENGINE WORK	1		
21- - 2	8-96165	ADAPTER KIT ENGINE REMOVAL STAND (SEE FIG. 22 FOR BREAKDOWN)	1		
21- - 3	8-96038-1	ADAPTER KIT ENGINE AND SHROUD REMOVAL (SEE FIG. 23 FOR BREAKDOWN)	1		
21- - 4	8-96038-3	ADAPTER KIT SUPPORT SHROUD REMOVAL (SEE FIG. 24 FOR BREAKDOWN)	1		
21- - 5	8-96038-5	ADAPTER KIT FITTING TRANSPORTATION AND GROUND TEST RUN-UP (SEE FIG. 25 FOR BREAKDOWN)	1		
21- - 6	SE1012-003	STAND ASSY ENGINE HANDLING (SEE T.O. 35D3-3-38-4 FOR BREAKDOWN)	1		
21- - 7	8-96041-1	BRACKET ASSY ROLLER FORWARD ENGINE LH (SEE FIG. 26 FOR BREAKDOWN)	1		
21- - 8	8-96041-2	BRACKET ASSY ROLLER FORWARD ENGINE RH (SEE FIG. 27 FOR BREAKDOWN)	1		
21- - 9	SE0945-805	SLING ASSY ENGINE HANDLING (SEE FIG. 28 FOR BREAKDOWN)	1		
21- -10	SE0945-801	SLING ASSY ENGINE HANDLING (SEE FIG. 29 FOR BREAKDOWN)	1		
	SE0945-803	SLING ASSY ENGINE HANDLING ALTERNATE (SEE FIG. 30 FOR BREAKDOWN)	1		
21- -11	MMU3E	STAND ASSY SHROUD HANDLING	1		
21- -12	8-96167	ADAPTER KIT SHROUD HANDLING (SEE FIG. 31 FOR BREAKDOWN)	1		
21- -13	8-96046	ADAPTER ASSY ENGINE SHROUD HANDLING (SEE FIG. 32 FOR BREAKDOWN)	1		
21- -14	8-96047-7	BRACKET ASSY ROLLER CANNULAR SHROUD FWD (SEE FIG. 33 FOR BREAKDOWN)	1		
21- -15	8-96047-9	BRACKET ASSY ROLLER CANNULAR SHROUD AFT (SEE FIG. 34 FOR BREAKDOWN)	1		
21- -16	8-96067-179	CLAMP ENGINE REMOVAL	1		
21- -17	8-96068	ADAPTER ASSY ENGINE HOISTING (SEE FIG. 35 FOR BREAKDOWN)	1		
21- -18	8-96174	WEDGE ASSY ENGINE SHROUD POSITIONING (SEE FIG. 36 FOR BREAKDOWN)	1		
21- -19	8-96200	WEDGE ASSY ENGINE SHROUD ALIGNMENT (SEE FIG. 37 FOR BREAKDOWN)	1		

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(EXAMPLE OF EAM EQUIPMENT PREPARATION)

Figure 23. Typical Group Assembly Parts List (Maintenance Special Support Equipment)

Section III
Numerical Index

NAVAIR 00-000-0

PART NUMBER	FIGURE AND INDEX NUMBER	CODES SOURCE	CODES RECOVER	CODES KIT
INDICATOR, SYNC	5-41-6	P1	C	
INDICATOR, THER	6-36-3	P1	C	
INDICATOR, VARI	2-4-2	P1	C	
M8880-4	2-6-26	P	C	
M8880-5	8-9-16	P	C	
M8801	4-7-32			
M8802				
M8810				
M8816				
M8817				
M8818-1	6-7-39	KDP	C	
M8818-2	6-6-62	KDP	R	
M8819-1	7-1-3			
M8819-2	7-7-6			
M8864395	8-1-4	M	C	
M8864396	5-20-94	P	C	
M8864399	5-37-8	KD	R	
M96483	6-9-4			
M99651	1-46-7	P1	R	
M99652	3-19-15	P1	R	
M99687	2-17-13			
	4-18			
	6-36-1			
M99688	3-16-13	KD	C	
	3-4			
	4-16-4			
M99806	8-9-37	P	C	
	8-7-43			
	9-6-14			
M99806543	6-16-33	P1	C	

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PART NUMBER	FIGURE AND INDEX NUMBER	CODES SOURCE	CODES RECOVER	CODES KIT
M9989767	1-4-18	P1	R	
	2-3-3			
	2-4			
	2-6			
	3-9-44			
N132	8-13-11	P1	R	
N176	6-66-3	P	R	
N1704	7-19-37	M	R	
N2143889	8-4-4	M	C	
N2143840	5-18-19	KD	C	
N26413	6-21-23	KDP	C	
N26416	6-44-62	P1		
N27	3-32-45			
N28004	2-1-5			
N34012	8-11-15	P		
N348040	6-13-18	P		
N74832	7-18-1	M		
N76CR4	7-37-42			
N94877	4-113-3	C		
N94878	4-113-86	X1	C	
N94809	1-16-10	X1	R	
	1-18-47			
	3-8-27			
N99043	1-8-3	M1	R	
PB804	7-15-10	P2	C	
PB809-1	2-21-36	P2	R	
PB809-2	6-10-64	M	R	
PR641	7-12-16	P1	C	
PR680	7-8-11			
P136214	8-7-14	P	C	
P1480	5-29-31	P1	C	

PARA 3.6.4

PART NUMBER	FIGURE AND INDEX NUMBER	CODES SOURCE	CODES RECOVER	CODES KIT
P140014	8-14-26	P1	C	
P148069	8-11-3	P1	C	
P16975	7-3-19	P1	C	
P18080	2-13-84	P		
P18643	3-26-11			
P208	4-8-33	M	R	
P201	8-4-37	KD	R	
P21612	7-11-7	KD	C	
P22BR	3-9-25	X2	R	
P22806	2-28-8	X2	C	
P220216	3-6-17			
P260312	4-13-3	X1	C	
P27	3-15-11	P1	C	
[illegible]	7-8-14	P	R	
	7-8	P	R	
	3-56-1	P	C	
[illegible]	8-33-29			
P4006	5-18-36	X1		
P6432	7-4-21	M		
P66AC	1-18-48	M1	C	
P80316	7-3-9	P1		
P69064	5-3-16	P1	R	
P8	4-11-4			
P883C4	2-15-24	P		
P886C4	3-8-4			
P806C6	1-14-7	P2	C	
P84806	1-14-6	X1	R	
P866	6-11-2	X1	C	
P867B	2-14-3	M	C	
P8906	3-18-6	M	C	

PARA 3.6.3

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Figure 24. Typical Numerical Index Page

REFERENCE DESIGNATION	FIGURE AND INDEX NUMBER	PART NUMBER
C101	10	8313418-515
C102	14	8313418-527
C103	24	8313415-514
C201	23	8313415-516
C202	11	8313418-528
C301	22-11	8313415-532
C304	16	8313415-526
C401	47-10	8313415-512
C402	30-13	8313415-529
C501	40-76	8313415-530
C601	22-9	8313415-523
C602	13	8313415-525
C603	22-10	8313415-522
C604 thru C606	22-8	8313415-511
C607	8	8313415-518
C608	7	8313415-517
C801	40-1	8511528-501
C1001	36-9	8313415-520
C1101	36-8	8313418-502
C1102	[illegible]	[illegible]3415-501
C6001	[illegible]	[illegible]5125-503
C6002	[illegible]	3491-501
C6003	[illegible]	3482-503
C6006	22-7	8012265-511
C6007	17-3	KS1504
C6008	17-11	89876-1
C6009	14-33	897653-1
C6012	22-19	HH2003C6
C6014	51-11	C100982-11
C6015	49-13	8u876-2
C6016	49-28	865432C4
C6017	20-16	9109H30
C6018	[illegible]	[illegible]2003CR
C6110	[illegible]	76-6
C6111	[illegible]	H19-32
C6112	[illegible]	[illegible]2004CR
C6113	7-60	7934R6-1
C6114	53-10	89-4631
C6126	54-23	HB2010C6
C6127	21-9	P8898-R4
C6168	17-5	C100982-6
C6169	21-11	HB2003C4
C6170	37-24	HC901-11
C6200	41-21	C10096-4
C6201	7-35	89876-8
C6202	7-51	HB2003C12
C6203	13-24	654296
C6404	12-46	DB84926X1
C6409	8-19	HR1009609043
C6410	25-30	89876-10
C6411	25-31	641284-4
C6601	7-14	801-8898
C6602	20-11	89876-12
C6603	16-13	89876-16

PARA 3.7.2.1

PARA 3.7.2.2

Block Type Reference Designation Index

REFERENCE DESIGNATION	FIGURE AND INDEX NUMBER	PART NUMBER
360A6 thru 360A18		(Same as 360A5)
360A19	2-15	8457552-501
360A19CR1 thru 360A19CR2	4-11	8950093-3
360A19C1 thru 360A19C4	4-7	DM15F561J100VDC
360A19C5 thru 360A19C6	[illegible]	[illegible]KB473K
360A19E1 thru 360A19E3	[illegible]	[illegible]0105-20
360A19P1	4-12	47B24620
360A19Q1 thru 360A19Q8	4-3	2N404
360A19R1 thru 360A19R5	4-7	8977933-268
360A19R6	4-6	8977933-237
360A19R7	4-5	8977933-226
360A19R8	4-7	8977933-268
360A19R9	4-1	8977933-318
360A19R10	4-2	8977933-210
360A19R11	4-7	8977933-268
360A19R12	4-1	8977933-318
360A19R13	4-7	8977933-333
360A21R1	3-7	HB209836
360A21R2	3-9	HB209935
360A21R3	3-11	HB209938
360A21R4	3-8	HB209937
360A21R5	3-6	HB209940
360A21R6	3-14	HB209939
360A22C1	5-17	889766-2
360A22C2	5-19	889766-6
360A22C3	5-11	889766-12
360A22C4	5-4	889766-4
360A22C5	5-21	889766-18
360A22C6	5-22	889766-16
360A22C7	5-3	889766-10
360A22C8	5-6	889766-14
360A22C9	5-2	889766-8
360A22C10	5-4	889766-20
360A22C11	5-7	889766-26
360A22C12	5-8	889766-22
360A22C13	5-10	889766-24
360A22C14	5-9	889766-28
360A22C15	5-15	889766-30
360A24R1	7-1	666341-211
360A24R2	7-8	666341-214
360A24R3	7-7	666341-219
360A24R4	7-11	666341-212
360A24R5	7-6	666341-216
360A24R6	7-5	666341-215
360A24R7	7-13	666341-221
360A24R8	7-12	666341-217
360A24R9	7-3	666341-213

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Unit Type Reference Designation Index

Figure 25. Typical Reference Designation Index Page

ALPHABETICAL INDEX

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