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MILITARY STANDARD

WORK UNIT CODES FOR AERONAUTICAL EQUIPMENT; UNIFORM NUMBERING SYSTEM



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FOREWORD

1. This military standard is approved for use by the Naval Air Systems Command and is available for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Warfare Center Aircraft Division Lakehurst, Code SR3, Lakehurst, NJ 08733-5100, by using the self-addressed Standardization Document Improvement Proposal (DD-1426) appearing at the end of this document or by letter.
3. Work Unit Codes for all Navy/Marine Corps aircraft, support equipment, training devices, drones, targets and meteorological devices are assigned, controlled and published, under direction of NAVAIR, by the Naval Air Technical Services Facility (NAVAIRTECHSERVFAC), Code 33, 700 Robbins Avenue, Philadelphia, PA 19111.
4. This revision incorporates changes made necessary by changing technology, improved logistics planning systems, and expansion of maintenance documentation to categories of equipments not previously covered by the Maintenance Data System (MDS) of the Naval Aviation Maintenance Program (OPNAVINST 4790.2).
5. Use of this standard by activities under the cognizance of the Naval Air Systems Command shall be mandatory effective on the date of issue.

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1. SCOPE

1.1 Purpose. The purpose of this standard is to identify Work Unit Code System Codes, define the methods used in assignment of Work Unit Codes and describe the use of Work Unit Codes in maintenance data collection systems.

1.2 Scope. This standard prescribes the numbering system and structure of Work Unit Codes used in maintenance data systems.

1.3 Work Unit Code policy. The WUC system provides for coding of equipments, components and subassemblies as they apply to weapon systems, air vehicle systems, airborne weapons systems, targets, trainers and support equipment and provides a basic reference designation for maintenance data collection specified in OPNAVINST 4790.2.

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards and handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

Military

MIL-M-23782 Manuals, Technical: Work Unit Code; Preparation of

STANDARDS

Military

MIL-STD-12 Abbreviations for Use on Drawings, Specifications,
Standards and in Technical Documents

MIL-STD-196 Joint Electronic Type Designation Systems

MIL-STD-1388-2 DOD Requirements for a Logistic Support Analysis Record

MIL-STD-1812 Type Designation, Assignment and Method for Obtaining

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Department of Defense Single Stock Point, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings and publications. The following other Government documents, drawings and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

NAVAIRINST 4423.11 Policies, Procedures and Responsibilities for
Application of Uniform Source, Maintenance and
Recoverability (SM&R) Codes

(Copies of NAVAIRINST 4423.11 are available from the Department of Defense Single Stock Point, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094.)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3. DEFINITIONS

3.1 General. For the purpose of this standard, the terms used herein are defined as follows:

3.1.1 Component/assembly. A number of parts or assemblies or any combination joined together to perform a specific function. Examples include Liquid Oxygen Converter, Fuel Control, Receiver Transmitters, Visual Display Terminals, Aircraft Slings or Target Reels.

3.1.2 In-shop. Maintenance work which requires the use of shop facilities to further disassemble, repair or bench test.

3.1.3 On equipment. This term applies to maintenance work which can be performed at or on the weapons system or equipment while it is located on the line, in the hangar, or in place without the use of in-shop equipment.

3.1.4 Part. An item of material, usually not repairable; a specific piece of a sub-subassembly, subassembly or higher assembly.

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portion 3.1.6 Subassembly. Two or more parts which form a of an assembly or component.

NE: The distinction between an assembly and a subassembly is determined by the individual application. An assembly in one instance may be a subassembly in another where it forms a portion of an assembly.

3.1.7 Sub-subassembly. An assembly or component contained within and is part of a subassembly.

3.1.8 Support Equipment (SE). Describes the various common and peculiar support equipments used to service, handle, maintain and check all piloted and unmanned air vehicle systems, airborne weapons systems, missiles, targets, trainers and support equipment.

3.1.9 System. A functional grouping of equipments which form a major part of a weapon system. Examples include Alighting/Launching System, Flight Control System, Radar Navigation System, Computer System or Engine Test System.

3.1.10 Subsystem. Equipment which performs a specific function in the overall operation of that functional system. Examples include forward fuselage, main landing gear, navigational sets, altitude warning sets, environmental/target effects producing equipment, flight reference test/check equipment or airborne towed targets/mine countermeasure equipment. The third character of the WUC distinguishes engine models in those instances where three characters are used exclusively.

3.1.11 Weapon system. A grouping of functional systems into a weapons platform (e.g., Air Vehicle Systems, Training Device Systems, Support Equipment Systems, Target System) with associated integrated systems such as propulsion, auxiliary power, control and tactical capability.

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3.1.12 Work Unit Code (WUC). The WUC is a one, three, five or seven character numeric or alphanumeric code. It identifies a system, subsystem, set, major component, repairable subassembly, or part of an end item being worked on.

3.2 System Code. The system code is the first two digits of the Work Unit Code.

3.2.1 Air Vehicle Systems/Targets/Trainers. Air Vehicle Systems describes piloted and unmanned air vehicle structures, the major subdivisions used to control and direct the air vehicle in flight, on land or on water, and the subsystems providing crew/passenger/equipment support within the air vehicle envelope. Air and surface launched remotely piloted vehicle equipment including ground control, monitoring, launch and recovery systems, simulated systems/equipments/facilities in trainers and associated equipments are covered by the same basic numbers as the air vehicle major subdivisions. Trainer unique systems are identified to training devices. The Air Vehicle Systems, Airborne Weapons Systems, Targets and Trainers are listed as follows by their corresponding system codes:

11	Airframe	Structural components, including the framework and skin of the fuselage, empennage and wings, also bulkheads, doors, pylons, nacelles and transparent areas of the airframe systems.
12	Furnishings/compartments	Hardware in the fuselage interior required for crew/passenger use and may include equipment mounting/storage compartments.
13	Alighting/launching system	Equipment used for support/direction/stability on the ground as well as special take-off and landing equipment.
14	Directional flight controls/lift systems	Control surfaces, cockpit controls and control systems.
15	Rotary wings	Helicopter rotors which are used to provide lift as well as propulsive force to the air vehicle (formerly System 34).
17	Escape systems	All equipment used for emergency egress.
18	Training equipment flight characteristics/force generating equipment	Systems/equipments that simulate static and dynamic characteristics not coded elsewhere.
19	Training equipment visual/aural systems	Equipments which produce environmental/tactical/target effects.
21	Reciprocating engine	Piston-powered engines of either an opposed or radial type.

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| 22 | Turboshaft/turboprop engines | Gas-turbine-powered engines whose motive power is extracted through a rotating shaft to drive propellers or rotors. |
| 23 | Turbojet engines | Gas-turbine-powered engines whose motive power is derived from high velocity exhaust gases exiting through a nozzle. |
| 24 | Auxiliary power systems | Equipment used for supplying electrical/pneumatic/hydraulic power for in-flight or ground emergency operation of special equipment, includes RAM air turbine units, hydraulic drives, hypergolic fuel drives, fire/heat detection/suppression and extinguishing equipment, and installation monitoring/control equipment (some equipment formerly coded in System 49). |
| 25 | Propulsion systems | Includes solid and liquid propellant rocket motors. |
| 26 | Vertical Takeoff and Landing/Short Takeoff and Landing (VTOL/STOL) transmissions/drives | Equipment used to transmit power from the engine(s) to the rotors/propellers (formerly System 15). |
| 27 | Turbofan engines | Covers turbofan engine sections and systems. Sections and systems are similar to those listed in turbojet engines with the addition of a fan. |
| 29 | Power plant installation | Incorporates power plant supports and mounts, control levers, starting systems approach power compensating sets, and other systems that are not part of the basic engine (some equipment formerly coded in System 49). |
| 32 | Propellers | Two or more bladed open fans used to convert engine shaft power into thrust to drive the air vehicle through the air. |
| 36 | Ducted fans | Propellers with ducting to guide the flow of air approaching and leaving the propeller. |
| 41 | Environmental control/pneumatic systems | Refrigeration units, cabin conditioning and defogging systems, anti-"G" system, pressurization system, vacuum system, required for crew and passenger safety and comfort during flight. |
| 42 | Electrical power supply/distribution/lighting systems | AC and DC power sources, electrical wiring, power conversion, control and regulating equipment and all interior and exterior lighting systems. |

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| 45 | Hydraulic systems | Hydraulic pressure sources, their associated control, regulating devices, indicating and warning instrumentation. |
| 46 | Fuel systems | Internal and external tanks, refueling and defueling equipment, distribution systems and associated instrumentation. |
| 47 | Oxygen systems | Installed equipment for the storage, servicing and distribution of breathing oxygen for the crew and passengers. |
| 48 | Ice and rain removal/
protection systems | Windshield anti-ice, rain removal and repellent, surface anti-ice, deicing, ice detection and warning. |
| 49 | Miscellaneous emergency/
utility systems | Emergency flotation and aerial recovery/delivery equipment including cargo/rescue hoists and caution/advisory equipment. |
| 50 | Cockpit management systems | Integrated electronics equipment necessary to display and enter data/commands for essential aircraft systems/subsystems. Equipment includes Multifunction Displays, Display Processors and Control Display Units. |
| 51 | Instrumentation systems | Instruments and instrument systems that are not part of a functional system. |
| 52 | Autopilot systems | Automatic pitch, yaw and roll control systems when not a part of an integrated guidance and flight control system. |
| 53 | Drone guidance systems | A guidance and flight control system which, by remote control, operates the pitch, yaw and roll surfaces on drone air vehicles. |
| 54 | Telemetry systems | Transmitting sets, receivers/recorders, and sensors/transducers which send data from one station to another. |
| 55 | Vehicle Management System | Digital computers, related sensor elements, data distribution networks and associated equipment utilized to monitor and control the aircraft systems/subsystems during all phases of flight and ground operation. |
| 56 | Flight reference systems | Attitude computer groups, vertical and flight reference sets, compass sets, attitude heading reference sets, air data computer and vertical gyro systems. |
| 57 | Integrated guidance and
flight control systems | Air vehicle and target integrated guidance control systems. Also includes autopilots that are part of an integrated system. |

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58	In-flight test/malfunction analysis and recording equipment	Installed test consoles and in-flight equipment that monitors the operation of aircraft systems. Includes control and sequence units, data retrieval units and oscilloscopes and digital readout units.
59	Target scoring and augmentation systems	Scoring acquisition and augmentation equipment including visual augmentation (smoke generator) systems.
61	HF communications systems	High frequency radio communication sets and their related and associated equipment.
62	VHF communications systems	Very high frequency radio communication sets and their related and associated equipment.
63	UHF communications systems	Ultra high frequency radio communication sets and their related and associated equipment.
64	Interphone systems	Inter-crew-member communications sets and their related and associated equipment.
65	Identification Friend or Foe (IFF) systems	Radio and radar identification and recognition, integration and transponder sets and their related and associated equipment.
66	Emergency radio systems	Emergency radio transmitters and crash location sets and their related and associated equipment.
67	COMM/NAV/IFF (CNI) integrated package systems	Integrated communication-navigation-IFF sets, integrated electronic controls and crypto devices and their related and associated equipment.
69	Miscellaneous communications systems	Digital data communications systems, sound recorders, antennas and communication equipment not specified in other systems and their related and associated equipment.
71	Radio navigation systems	Direction finders, radio compass, TACAN, LORAN navigational sets, marker beacon, all weather landing sets, glide slope receiver sets, distance measuring sets and their related and associated equipment.
72	Radar navigation systems	Doppler radar, ground position indicator groups, terrain avoidance, altimeter and drift radars, ranging, search and navigational radars, radar beacons, vertical display and television camera sets and their related and associated equipment.

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- 73 **Bombing navigation systems** Loft bomb computing, bomb director computers, flight director sets, navigational computers, target position computers, data transmitters and display groups, data analysis computers, inertial navigation and measurement sets, sonobuoy bearing/range receiver sets, projected map and vertical flight reference systems, magnetic anomaly and detecting sets, heads-up display sets, SONAR detecting/ranging/recorder sets, digital data computers and their related and associated equipment.
- 74 **Weapons control systems** Weapons control radar sets, altitude warning sets, remote control radio sets, target/fire control sets, weapons release computer/control sets, target acquisition sets, infrared and low light level TV sets, fuse function control sets, guided missile control sets, sonobuoy data display systems, unmanned air vehicle launch, recovery, control and monitoring systems and their related and associated equipment.
- 75 **Weapon delivery systems** Launchers, bomb racks and related eject mechanisms, gun systems, ammunition feed equipment and chemical dispensing equipment, and their related and associated equipment (formerly System 84).
- 76 **Countermeasures systems** Infrared detecting sets, pulse analyzers, direction finder sets, chaff dispensers, ECM receiving/transmitting sets, radio frequency blanking sets, signal data recorders/reproducers, electronic countermeasures (ECM) destruct systems, aural and visual warning systems, passive defense systems, search receivers, jamming transmitters, track breaking equipment, smoke dispensing equipment and their related and associated equipment.
- 77 **Photographic/reconnaissance systems** Cameras, magazines, filters, controls, dehydrators, heaters, exposure counters, vibration isolators, intervalometers, bomb damage evaluators and recorders and small reconnaissance radar sets and their related and associated equipment.
- 78 **Training equipment instrumentation/communication systems** Modified and simulated equipments using non-standard components and assemblies, support training requirements for equipment listed under WUCs 50 through 69.

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79	Training equipment navigation, weapons delivery, ECM and reconnaissance systems	Modified and simulated equipments using non-standard components and assemblies supporting training requirements for equipments listed under WUCs 71 through 77.
83	Airborne expendable ordnance	Includes air-launched rockets, bombs, JATO rocket motors, Sound Underwater Signals (SUS).
85	Airborne weapon containers	Includes all containers for airborne missiles, sections and expendable ordnance.
91	Emergency equipment	Life rafts, personnel parachutes and equipment, survival kits, personnel survival equipment, emergency lighting, medical equipment, SAR equipment, portable fire-fighting equipment and emergency pyrotechnic equipment.
92	Tow target/towed mine countermeasures systems	Tow targets and miscellaneous tow equipment, reel hydraulic systems, target reels, carriers and containers.
93	Deceleration/drag chute systems	Deceleration/drogue parachutes, release mechanisms and deceleration parachute enclosure operating systems.
94	Meteorological equipment	Atmospheric and weather data gathering systems and equipment.
95	Integrated Processor System	Digital computers utilized to process avionic sensor and mission related data.
96	Personnel equipment	Aviators' clothing and breathing (oxygen) equipment which is issued to flight crews for their personal use.
97	Explosive devices	Includes all cartridges, Cartridge Activated Devices (CADs), seat catapult rockets and weapons release devices
99	Training equipment general purpose computer systems	Includes all general purpose analog and digital computers, related interface systems and peripheral equipment.

3.2.2 Support Equipment (SE). Describes the various common and peculiar support equipments used to service, handle, maintain and check all piloted and unmanned air vehicle systems, airborne weapons systems, missiles, targets, trainers and support equipment.

11	Cleaning/corrosion/preservation equipment	Incorporates steam and high pressure air/water cleaners, degreasers, aircraft and support equipment component cleaners, flushing systems, ultrasonic cleaners, preservation/depreservation machines and spray painting equipment.
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12	Environmental conditioning equipment	Covers pre-heaters, heating units, blowers, air conditioning units, ventilation units, dehydrators, dehumidifiers, drainage pumps, drying ovens, purging equipment.
14	Air compressors	Fixed and portable engine/motor driven air compressors.
15	Oxygen/nitrogen equipment	Items used to generate, store and transport O ₂ and N ₂ , to service aircraft and to periodically check/verify gas quality.
19	Miscellaneous servicing equipment	Incorporates pre-oilers, vacuum pumps, fueling/defueling equipment, ordnance servicing equipment, battery chargers, lighting and illumination equipment, water/alcohol servicing equipment.
21	Handling equipment	Aircraft slings, tie-downs, prop slings, armament handling equipment, cradles and booms, aircraft/engine handling stands.
22	Loading equipment	Cargo loading equipment, weapons loading equipment and adapters, lift trucks, cherry pickers, cranes, hoists, winches, fork-lifts, boarding ramps.
23	Transport/towing equipment	Trucks, trailers, ordnance trailers, general and special purpose dollies, skids, rails, spotting dollies, tow bars, aircraft tow tractors and SE tow tractors (formerly System 21).
24	Expeditionary airfield equipment	Includes AM-2 aluminum runway matting panels and matting accessories, Fresnel Lens optical landing systems, airfield lighting, M-21 expeditionary aircraft recovery system and communications systems.
31	Maintenance equipment	Maintenance platforms, maintenance stands, power hand tools, bench tools, repair kits, jacks, welding equipment, holding fixtures, unique composite repair equipment, dry honers and honing machines.
32	Safety equipment	Crash and salvage cranes, crash trucks, fire trucks, fire fighting equipment, hazardous condition monitors, special purpose safety clothing, aircraft tire build-up equipment.
33	Enclosures	Mobile facilities, portable maintenance shelters, service shelters, removable containers, hoppers, storage tanks (formerly System 31).

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34	Engine test equipment	Engine test stands and facilities, engine analyzers, engine test fixtures and adapters, engine trim sets.
35	Accessories test equipment	Component test benches/test stands, constant speed drive test benches, generator test stands, pneumatic and oxygen system components test stands, load banks.
36	Hydraulic servicing and test equipment	Includes manual hydraulic fill/service units electric/diesel driven hydraulic jennies, hydraulic benches and hydraulic system component test stands (formerly System 17).
38	Check/inspection equipment	Includes physical properties inspection units, non-electric calibration equipment, fuel probe testers, weighing equipment, fluid contamination test kits, NDTI equipment.
41	Test Program Set	A combination of computer software printed software and interface adapters which enables the automatic/semi-automatic identification of a requirement for corrective maintenance action when used in conjunction with general/special purpose automatic test equipment (formerly System 42).
43	Engine starting equipment	Fixed and portable pneumatic starting systems including pods (formerly System 16).
44	Electrical generating equipment	Fixed and portable engine/motor driven generators, mobile electrical power plants, electrical distribution systems, power monitoring and conditioning equipment (formerly System 13).
48	Support equipment engines	Includes gasoline and diesel powered reciprocating engines and gas turbine engines.
51	General instruments test and check equipment	Test equipment utilized in testing standard flight, engine, navigation, fuel quantity and Pitot static system instruments.
52	Autopilot test and check equipment	Includes the test equipment utilized to check pitch, yaw and roll control systems which are not part of an integrated guidance and flight control system.
53	Drone guidance and remote control test and check equipment	Includes the test and check equipment required to support drone guidance systems and remote control equipment.

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54	Telemetry test and check equipment	Includes the test and check equipment required to support telemetry systems.
56	Flight reference test and check equipment	Includes the test and check equipment required to support flight reference systems.
57	Integrated guidance/flight control test and check equipment	Includes the test equipment to check aircraft and missile integrated flight control and guidance systems. Also includes autopilots that are part of an integrated system.
61	HF communications test and check equipment	Includes the test and check equipment required to support radio communications sets including high frequency peculiar interface devices for automatic test equipment.
62	VHF communication test and check equipment	Includes the test and check equipment required to support radio communications sets including very high frequency peculiar interface devices for automatic test equipment.
63	UHF communications test and check equipment	Includes the test and check equipment required to support radio communications sets including ultra high frequency peculiar interface devices for automatic test equipment.
64	Interphone system test and check equipment	Equipment required to support inter-crew communication systems.
65	IFF test and check equipment	Radio/radar identification interrogation and transponder related support equipment.
66	Emergency radio systems test and check equipment	Survival radios and crash locator system support equipment.
67	COMM/NAV/IFF(CNI) integrated package test and check equipment	Includes the test and check equipment to support integrated CNI sets, crypto devices and integrated electronic controls.
69	Miscellaneous communications test and check equipment	Support equipment for digital data receivers/transmitters, ASW Sonobuoy recorders/playback and analysis equipment.
71	Radio navigation test and check equipment	Includes the test and check equipment required to support radio navigation systems.
72	Radar navigation test and check equipment	Includes the test and check equipment required to support radar navigation systems.

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73	Bombing navigation test and check equipment	Includes the test and check equipment required to support bombing navigation systems.
74	Weapon control test and check equipment	Includes the test and check equipment required to support weapon control systems.
75	Weapon delivery test and check equipment	Includes the test and check equipment required to support weapon delivery systems and related equipment.
76	ECM test and check equipment	Includes the test and check equipment required to support electronic counter-measures systems.
77	Photographic and reconnaissance test and check equipment	Includes the test and check equipment required to support photographic and reconnaissance systems.
78	Multipurpose test and check equipment	Includes the automatic/semi-automatic test equipment, manual analog and hybrid testers not specifically identified in other functional categories.
79	General avionics test and check equipment	Includes the standard avionic support equipment such as oscilloscopes, voltmeters, frequency counters, signal generators, sweeper carts, spectrum analyzers and Maintenance Information Automation Retrieval System (MIARS) reader/printers.
81	Airborne weapon support equipment	Includes the handling and test and check equipment for missiles and related equipment.
91- 99	Weapon system peculiar support equipment	Includes the equipment required to support a particular weapon system not identified in other functional categories.

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4. GENERAL REQUIREMENTS

4.1 Work Unit Code (WUC) concept. Work Unit Codes (WUC) shall be developed in functional system breakdown order and documented in Logistics Support Analysis Record (LSAR) format in accordance with MIL-STD-1388-2B. The repairability aspect of an item shall be determined by the applicable Source, Maintenance, and Recoverability (SM&R) codes specified in NAVAIR Instruction 4423.11 and reflected in the applicable Maintenance Plan or Logistics Support Analysis Data.

NOTE: Functional system breakdown equates to the identification of the system level codes (first two digits of the WUC) then to the top down breakdown of the drawing package.

4.2 WUC assignment. A WUC is usually assigned to every repairable item. Five digit codes are assigned to those items which will normally be removed, replaced, tested, adjusted or repaired by maintenance personnel while performing "on-equipment" work, i.e., work at or on the weapon system which does not require the use of shop equipment other than portable type test or repair equipment. Sixth and seventh position codes are assigned to repairable components subassemblies, modules/units, cards and significant parts in order to facilitate the reporting of "in-shop" component repair work. Departures from this basic format may be authorized to serve special management requirements. The cited explanation supports an Avionic type assignment, whereas non-Avionic systems are assigned to the indenture level of the drawing package.

NOTE: Codes may be assigned to throw away components and non-repairable time change items if they are mission essential and require on equipment servicing/adjustment to maintain operational reliability of the system.

4.2.1 Weapon systems and support equipment. All weapon systems and support equipment specified in the contract shall have a WUC assigned.

4.2.2 WUC numbering system. WUCs can consist of up to seven characters and are broken down as follows:

4.2.2.1 First two digits. The first two digits identify the types of system or equipment. These digits are standardized codes and shall not be changed except by a change notice or revision of this document.

4.2.2.2 Third character. The third character is always alphabetic for support equipment. It identifies engine models in those instances where the third character is used exclusively and in conjunction with the fourth character identifies entire subsystems, a major group of assemblies, a complete electronics set or an end item of support equipment.

4.2.2.3 Fourth character. The fourth character is always alphabetic for support equipment. It identifies items such as a complete electronics set (AN/ARC-27, AN/APS-38), an entire support equipment set (AN/APM-200, AN/ASM-499, AN/USM-247), a specific group of components or complete engine sections. When reference designators such as 1, 2, etc., are used, the Work Unit Code nomenclature will not reflect these reference designators. See paragraph 4.2.4.

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4.2.2.4 Fifth character. The fifth character is normally used to indicate individual components associated with the "on-equipment" phase of maintenance work. The number nine, used in the fifth position, indicates Not Otherwise Coded (NOC). It is the last entry in each sequence of five character WUCs.

NOTE: The NOC category is used for reporting occasional or recurring discrepancies on non-coded items and may indicate the need for specific codes for these items.

4.2.2.5 Sixth character. The sixth character specifies a subassembly, part group, module or unit. When possible, these items shall be identified by reference designators, for example 1A1, 1A2. The sixth character is normally associated with "in-shop" code numbers.

4.2.2.6 Seventh character. The seventh character is used to identify module subassemblies or cards, etc. Whenever possible, these items shall be identified by reference designators such as 1A1A1, 1A1A2, 1A1A3. Currently, WUCs are limited to seven characters.

NOTE: When sub-indentured items such as 1A1A1 and 1A1A2 are reference designated to 1A1, and 1A1 is not the true next higher assembly, logistically or supply-wise these sub-indentured items will be coded as a six position WUC. See Figure 1 as an example of this.

4.2.3 Detailed assignment instructions.

- a. Zero "0" is never used between other digits in the WUC, except at system code level and to form numbers such as 13001, 13020, 13102, 1311102.
- b. Numeric characters are used first in formatting WUC listings of airborne systems. Alphabetic characters A through Z, except I and O, are used to augment numbers when coding third through seventh positions. Alpha characters are always used in the third and fourth position of Support Equipment WUCs.
- c. The fifth digit "9," which designates NOC, is always included at the end of each complete five digit item group listing. When a list is long enough to require use of letters in the fifth digit position, the "9" shall be listed after the last letter code. In those instances where the coding assignment for fifth level items exceeds eight numerals plus twenty-four letters, a statement shall be inserted prior to the NOC in order to identify the system and the newly designated fourth level block, when that fourth level is not a consecutive fourth level code. For example, 74240 would be used to list items 74241 through 7424Z. Subsequent to 7424Z and prior to 74249, a statement would be inserted to read "AN/APG59 (CONTD) see 74260." Similarly another statement prior to 74260 would read "AN/APG59 RADAR (CONTD)."

NOTE: The NOC designation shall not be used for sixth and seventh character component breakdown listings. The continuation statement also applies to the sixth and seventh character when the next fifth or sixth character is unavailable.

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- d. When a singular component functionally serves two or more systems or subsystems, only one WUC is assigned to the component. This WUC shall appear in one of the systems' listings. The component will be referenced in the remaining applicable systems listings with a reference to the previously assigned WUC, e.g., "Nomenclature (REF 7111400)." Five dashes (-----) shall be used in the code column for components referenced in this manner. See figure 1. When a multifunctional component is assigned a seven character breakdown, the sixth and seventh character breakdown shall appear in the "referenced" listing only.
- e. All WUCs do not require use of the sixth and seventh characters. Consequently, these characters are used in those instances when it is necessary to further break down a repairable into its repairable subassemblies, modules and parts. When this breakdown is used, the complete repairable will be identified with the basic five character code plus two "zeroes" in the sixth and seventh positions (XXXXX00). Repairable items which do not require further breakdown shall employ five characters only.
- f. The nomenclatures employed when assigning WUCs are consistent with the nomenclatures located in the title block of drawings which have been officially assigned in accordance with MIL-STD-196 and MIL-STD-1812. WUC nomenclatures shall be abbreviated in accordance with MIL-STD-12. WUCs undergoing preparation on weapons systems and support equipment systems for which maintenance and illustrated parts breakdown technical publications have been delivered shall use the nomenclatures employed in these publications.
- g. WUCs are unclassified. Minor changes to the nomenclature may be necessary to comply with security requirements.
- h. Airborne systems and support equipment WUCs are assigned to those equipments having approved military nomenclature, type designations and Type Equipment Codes assigned, where applicable, e.g., AN/ARN-52, A/A37B1, AN/USM-470, TEC GVAN. For those equipments which require and do not have an approved military nomenclature, type designation or TEC assigned, assignment of WUCs shall be delayed until identification is resolved.

4.2.4 Component assignment. Components requiring service records will be assigned WUCs. For multiple installation of items in the same system such as power plants there is only one coding breakdown. This applies to "left" and "right" items, main landing gear, wings, etc., all of which are merely "mirror images." It also applies to avionics components and sub-parts installed in multiples such as black boxes, modules and cards. Because they do not have individual reference designators, they are actually coded as one item. When traceability is required, position sensitive indicators (five dots (.....)) followed by "LEFT" and "RIGHT" with "LH" and "RH" respectively to the far right in the nomenclature column. See figure 6 for examples using position sensitive indicators.

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NOTE: Position sensitive indicators are assigned by the Naval Air Technical Services Facility as directed by the cognizant field activity and authorized by the Naval Air Systems Command.

4.3 WUC numbering structure. Figures 1 through 11 contain examples of detailed instructions for using individual characters in the WUC numbering structure for avionics systems, power plants, air vehicle systems, trainers, and support equipment systems. Coding for many of these systems is standardized and maintained in the master WUC file by Naval Air Technical Services Facility.

4.3.1 Avionics systems and avionics trainers. Avionics systems and avionics trainer systems are located in the 50000-79000, 92000, 94000 and 99000 series codes and will use the WUC numbering structures displayed with figures 1, 2, and 3 which illustrate how the individual characters are used to code these systems.

NOTE: Training equipment systems/subsystems which are modified and simulate operational equipments within the 50000 through 77000 series system codes are coded within the 78000 and 79000 series system codes.

4.3.2 Power plant systems. Power plant systems are located in the 21000 through 23000 and 27000 code series. Figures 4 and 5 depict power plant WUC numbering structure and show how individual characters are used to obtain basic engine identification.

4.3.3 Air vehicle systems and trainers. Air vehicle systems and trainers are located in the 11000-19000, 24000, 26000 and 29000-49000, 91000-93000, 96000 and 97000 code series. Figure 6 is an example of the WUC breakdown for a typical air vehicle or trainer system. Figure 7 illustrates how the WUC numbering structure identifies the complete system breakdown.

4.3.4 Support equipment. Support equipment system codes are located in the 11000-99000 support equipment code series. There are two categories of support equipment: non-avionics support equipment which are required to service or repair a mechanical, hydraulic or pneumatic component of an aircraft; and avionics support equipment which is used to test, maintain or repair electronic, electrical or electromechanical assemblies, components installed in an aircraft. Figures 8 and 9 show the avionics and non-avionics support equipment WUC numbering structure and illustrate how individual characters are used to obtain the support equipment identification. Figures 10 and 11 are examples of typical applications.

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5. DETAILED REQUIREMENTS

5.1 Work Unit Code Item Listing. A Work Unit Code Item Listing (WUCL) shall be prepared to provide data on all assemblies, subassemblies, and maintenance significant items that are repairable for use by the Government in developing WUC manuals (see 6.2). These technical manuals, which have been prepared in accordance with MIL-M-23782, describe detail requirements for Work Unit Codes.

5.1.1 Modifications to contracts or follow on for previously delivered equipment. In contracts for modifications or follow on for previously delivered equipment, the listing prepared will contain only those differences from the previously submitted list. If a WUC manual has been issued, the listing will reflect only the differences and the foreword will refer to the WUC manual number and date.

5.1.2 WUC approval/assignment due date. The contractor shall provide to the government the date on which WUC approval/assignment will be needed by the contractor.

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6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. This standard contains requirements for the development of WUCs for repairable assemblies and subassemblies.

6.2 Data requirements. The following Data Item Description (DID) must be listed, as applicable, on the Contract Data Requirements List (DD Form 1423) when this standard is applied on a contract, in order to obtain the data, except where DOD FAR Supplement 27.475-1 exempts the requirement for a DD Form 1423.

<u>Reference Paragraph</u>	<u>DID Number</u>	<u>DID Title</u>	<u>Suggested Tailoring</u>
5.1	DI-ILSS-81282	Work Unit Code Item Listing	

The above DID was cleared as of the date of this standard. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DIDs are cited on the DD Form 1423.

6.3 Superseded data. This standard and DI-ILSS-81282 supersedes Aeronautical Requirement, Work Unit Code Lists, Preparation of: AR-87, dated 27 April 1972, and DI-M-2070/UDI-M-21212, dated 25 July 1972.

6.4 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Preparing Activity:
Navy - AS
(Project ILSS-N030)

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CODES	DESCRIPTION
76000	COUNTERMEASURE SYSTEM
764E0	AN/ALR82 COUNTERMEASURE RECEIVER SET
764E100	R2349/ALR82 COUNTERMEASURE RECEIVER
764E110	RF MODULE ASSEMBLY A1
764E120	RF MODULE ASSEMBLY A2
764E130	RF MODULE ASSEMBLY A3
764E140	RF MODULE ASSEMBLY A4
764E150	RF MODULE ASSEMBLY A5
764E160	RF MODULE ASSEMBLY A6
764E170	CARD CAGE ASSEMBLY A7
764E180	VIDEO INPUT/AUDIO OUTPUT A7A1
764E190	CONTROL INPUT/POWER OUTPUT A7A2
764E1A0	VIDEO SWITCH MODULE A7A3
764E1B0	VIDEO SWITCH MODULE A7A4
764E1C0	VIDEO SWITCH MODULE A7A5
764E200	C11787/ALR82 BAND CONTROL
764E210	ILLUMINATION PANEL A1
764E2Z0	WIRING/RELATED CMPNT (WK CTR 69C ONLY)
-----	ECM SYSTEM ACFT WIRING (REF 4282D)
-----	C11788/A ANTENNA CONTROL (REF 76X6Z00)
764E9	NOC

FIGURE 1. Example of WUC breakdown for typical avionics systems.

NOTE: The above is an example of an avionics system specified in 4.3.1. Also shown are the use of reference designators in the sixth and seventh characters as specified in 4.2.2.5 and 4.2.2.6, respectively. An example of referenced items described in 4.2.3(d) is also provided.

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CODES	DESCRIPTION
63000	UHF COMMUNICATIONS SYSTEM
63340	AN/ARR69 RADIO RECEIVING SET
6334100	R1286/ARR69 RADIO RECEIVER
6334110	IF/AF MODULE
6334120	RF MODULE
6334130	PRESELECTOR
6334140	MAIN CHASSIS
63343	MT3590/ARR69 MOUNT
63345	MT3137/ARR69 ELEC EQPT SHOCK MT BASE
63349	NOC

FIGURE 2: Example of WUC breakdown for typical avionics systems.

NOTE: The above is a straight forward example of a five and six digit WUC application. For detailed explanations of fifth, sixth and seventh character codes, refer to 4.2.2.4, 4.2.2.5, and 4.2.2.6. Because the above list is complete, code 63349 is placed in the Work Unit Code column to indicate NOC.

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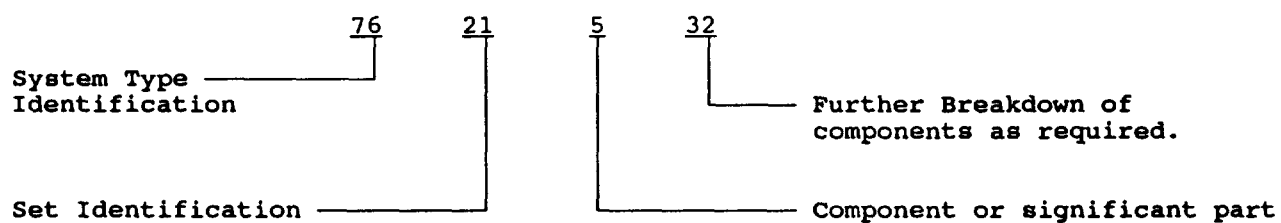


FIGURE 3: WUC numbering structure for avionics systems and avionics trainers.

NOTES:

The first two digits provide system type identification. Third and fourth characters designate a complete avionics set, e.g., AN/ARN-21, AN/ARC-27, AN/ASB-12.

The fifth character identifies components or significant parts which cannot be further disassembled. Sixth and seventh characters identify further breakdown of components as required and shall be numeric 1 through 9 followed by alphabetical A through Z excluding I and O.

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CODES	DESCRIPTION
27000	TURBOFAN ENGINES
27200	F402RR ENGINE
27210	LOW PRESSURE COMPRESSOR SECTION
2721100	LOW PRESSURE COMPRESSOR ROTOR
2721110	1ST STAGE MODULE
2721120	2ND STAGE MODULE
2721130	3RD STAGE MODULE
2721200	LOW PRESSURE COMPRESSOR
2721210	CASE UNIT
27220	COMBUSTION SECTION
27221	COMBUSTION CHAMBER LOWER CASE ASSEMBLY
27222	COMBUSTION CHAMBER
27223	BULKHEAD ASSEMBLY
27230	TURBINE ASSEMBLY
27231	TURBINE CASE
27233	TURBINE EXHAUST DIFFUSIVE ASSEMBLY
2723400	LOW PRESSURE TURBINE ROTOR
2723410	1ST STAGE MODULE
2723420	2ND STAGE MODULE
2723500	HIGH PRESSURE TURBINE ROTOR
2723510	1ST STAGE MODULE
2723520	2ND STAGE MODULE
ETC.	

FIGURE 4. Example of WUC breakdown for typical power plant system.

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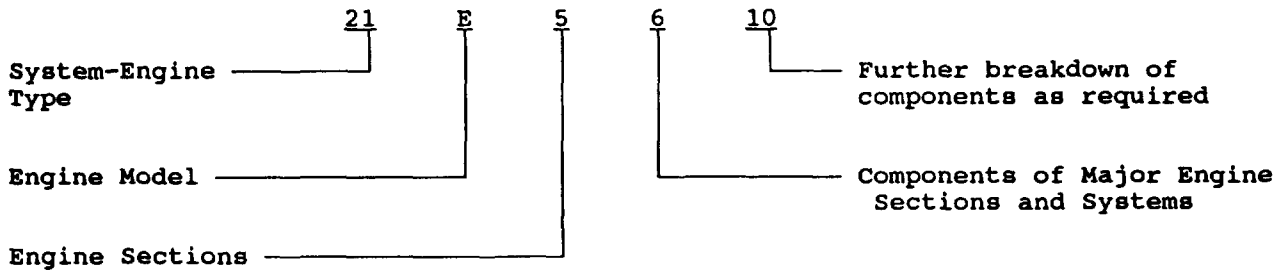


FIGURE 5. WUC numbering structure for power plants.

NOTE: In the figure above, the first two digits identify types of engines such as reciprocating, turboprop, turbojet and turbofan. Third and fourth characters designate engine model and section, respectively.

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CODES	DESCRIPTION
13000	ALIGHTING/LAUNCHING SYSTEM
13110	MAIN LANDING GEAR INSTALLATION
.....	LEFT HAND LH
.....	RIGHT HAND RH
1311100	MAIN LANDING GEAR SHOCK STRUT ASSY
1311110	MLG STRUT CYLINDER ASSEMBLY
1311111	MLG SHOCK STRUT CYLINDER
1311120	MLG SHOCK STRUT PISTON ASSEMBLY
1311121	MLG SHOCK STRUT PISTON
13112	MLG MNL EMERGENCY EXTENSION INSTL
13113	WHEEL SPEED MARK II ANTISKID XDCR
13114	WHEEL/TIRE ASSEMBLY
1311500	MAIN WHEEL BRAKE ASSEMBLY
1311510	BRAKE DISK
1311600	MLG TORQUE/BRAKE LINE STRUT ASSY
1311610	MLG TORQUE STRUT ASSEMBLY
1311611	MLG AFT TORQUE STRUT ASSEMBLY
1311612	MLG FWD TORQUE STRUT ASSEMBLY
13117	ANTISKID DETECTOR JUNCTION BOX INSTL
13118	MLG LIMIT SWITCH INSTALLATION
1311A	MLG TOUCHDOWN SWITCH INSTALLATION
1311B00	MLG EXTENSION/RETRACTION MECH INSTL
ETC.	

FIGURE 6. Example of WUC breakdown for typical air vehicle systems & trainers

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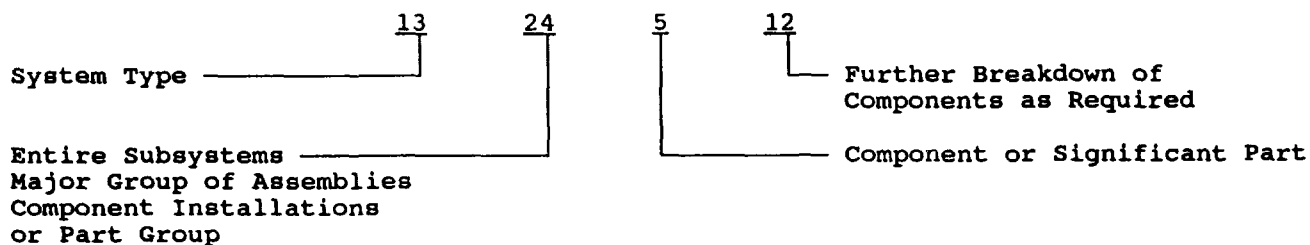


FIGURE 7. WUC numbering structure for air vehicle systems and trainers.

NOTE: See Figure 6 for example.

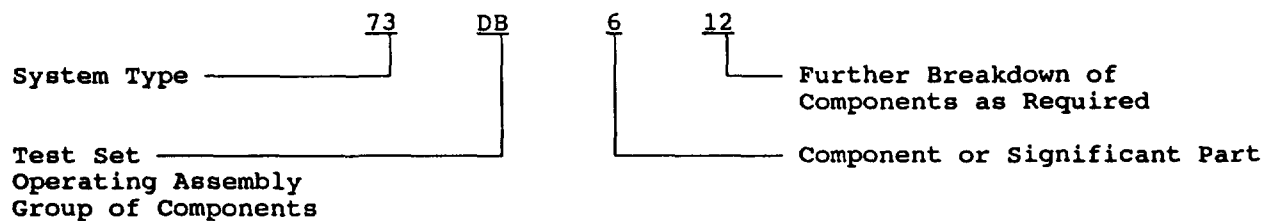


FIGURE 8. WUC numbering structure for avionics support equipment.

NOTE: In the figure above, the first two digits are numeric and identify the type of system being supported. Third and fourth characters are always alpha and identify a complete test set, operating assembly or group of components. The fifth through seventh character identifies the component or significant part. See Figure 11 for examples.

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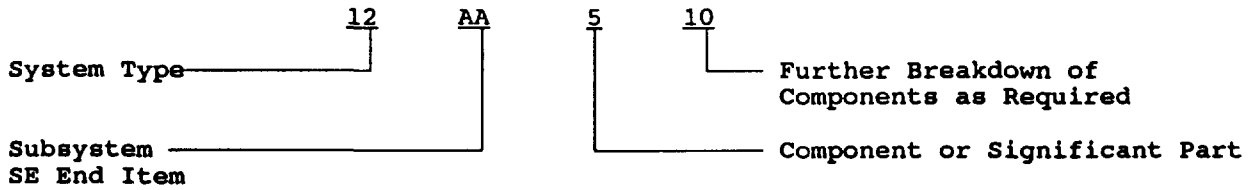


FIGURE 9. WUC numbering structure for non-avionics support equipment.

NOTE: In the figure above, the first two digits provide identification of the type of system. Third and fourth positions are always alpha and identify entire subsystems or a support equipment end item. The fifth through seventh characters identify component or significant parts. See Figure 10 for examples.

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CODES	DESCRIPTION
34000	ENGINE TEST EQUIPMENT
34HC0	BH109C/D JECTAL ANALYZER
34HC100	DECK ASSEMBLY
34HC110	AUTOTAK UNIT
34HC111	REAR PRINTED CIRCUIT BOARD
34HC112	FRONT PRINTED CIRCUIT BOARD
34HC120	AUTOTEMP UNIT
34HC121	PRINTED CIRCUIT BOARD
34HC130	RESISTANCE CHECK SWITCH
34HC140	PROBE CONTROL MODULE
34HC150	CALIBRATION MODULE
34HC160	60COS PROTECTION MODULE
34HC200	PROBE CASE
34HC210	HEATER CABLE
34HC220	CHECK CABLE
34HC230	POWER CABLE
34HC240	INSTRUMENT CABLE
34HC250	RPM CHECK ADAPTER
34HC260	EGT INDICATOR ADAPTER
34HC270	RESISTANCE CHECK ADAPTER
34HC280	INSULATION CHECK ADAPTER
ETC.	

FIGURE 10. Example of WUC breakdown for typical non-avionic support equipment.

NOTE: The above example is an illustration of how non-avionics support equipment is coded. Specific details are covered in 4.3.4.

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CODES	DESCRIPTION
74000	WEAPONS CONTROL TEST/CHECK EQUIPMENT
74KG0	649995-1 POWER SUPPLY TEST STATION
74KG100	TEST STATION SUBASSEMBLY
74KG110	TEST PANEL 6A1
74KG120	POWER SUPPLY SUBASSEMBLY 6A2
74KG130	POWER DISTRIBUTION PANEL 6A3
-----	POWER SUPPLY 6438B (REF 79JB4)
-----	POWER SUPPLY 6205B (REF 79JB6)
-----	DIGITAL VM 3440A (REF 79EA4)
-----	RANGE UNIT 3445() (REF 79EC5)
-----	OSCILLOSCOPE (REF 79FCG)
-----	VERTICAL PLUG IN 3A6 (REF 79FCY)
-----	TIME BASE PLUG IN 3B3 (REF 79FCZ)
-----	COUNTER 5325B (REF 79HBD)
-----	MULTIMETER 630() (REF 79EDS)
-----	PROBE 010-0185-00 (REF 79CB6)
74KG9	NOC

FIGURE 11. Example of WUC breakdown for typical avionics support equipment.

NOTE: The above is an example of the WUC breakdown for typical avionics support equipment. Complete support equipment coding details are specified in 4.3.4.

Commanding Officer
Naval Air Warfare Center Aircraft Division Lakehurst
Systems Requirements Department (Code SR3)
Lakehurst, NJ 08733-5100

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18 AUGUST 1992

3. DOCUMENT TITLE
WORK UNIT CODES FOR AERONAUTICAL EQUIPMENT; UNIFORM NUMBERING SYSTEM

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed)

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