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OF THE AIR FORCE ARMY AND NAVY**



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Operations Support

**DESIGNATING AND NAMING
DEFENSE MILITARY AEROSPACE
VEHICLES**

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This Department of Defense (DoD) Joint publication implements Air Force Policy Directive (AFPD) 16-4, *Accounting for Aerospace Vehicles at Units and Installations*. It provides guidance and procedures for designating and naming defense military aerospace vehicles across the DoD. This Air Force Instruction (AFI) defines the roles and responsibilities of required organizations, the processes for requesting new or retiring old designators and popular names, and the relationship between and military aerospace vehicle designators and names. Additionally, descriptions of standardized Mission Design Series (MDS) designation symbols, military department contacts, and sample MDS and Popular Name request letters are provided. This instruction applies to all military services and departments, including Reserve and National Guard components, which require official designators or names for defense aerospace vehicles. This publication may not be supplemented or further implemented/extended. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records and Management System. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are

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SUMMARY OF CHANGES

This document has been revised and must be completely reviewed. Major changes include the new site for the most recent MDS database on data.af.mil and the cancellation of DoD 4120.15-L, *Model Designation of Military Aerospace Vehicles* as the publically accessible MDS database. Major changes also include the addition of MDS designator “e” as a Prefix which indicates that the military defense aerospace vehicle was Digitally Developed.

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1. Overview.

1.1. This DoD Joint Publication establishes guidance and procedures for requesting a Mission Design Series designator and/or an MDS popular name for military aerospace vehicles. All requested and approved MDS designators will adhere to the DoD designator reporting system established in 1961 to standardize identification of military aerospace vehicles. This system uses letters and numbers to symbolize identifying characteristics of military aerospace vehicles of direct interest to the DoD (reference [Attachment 3](#) and [Attachment 4](#)). All requested and approved MDS popular names will be suitable, in accordance with Air Force standards and values, for public release and not violate registered brand names, trademarks, or otherwise infringe upon copyright laws. **(T-0)**

1.2. The Secretary of the Air Force (SECAF) serves as the DoD Lead Agent (reference DoD Directive (DoDD) 5101.1, *DoD Lead Agent*) for the naming and designation of military aerospace vehicles (reference DoDD 4120.15E, *Designating and Naming Military Aerospace Vehicles*). The SECAF delegated authority relating to standardizing references to military aerospace vehicles to the Air Force Directorate of Programs, Program Integration Division (AF/A8PE) (reference Headquarters Air Force Mission Directive (HAFMD) 1-56, *Deputy Chief of Staff Strategic Plans and Requirements*). Acting on the behalf of the DoD Lead Agent, AF/A8PE may not re-delegate full authority of the MDS program, but does reserve the authority to arrange for and execute inter-Service support agreements, memoranda of understanding, and other necessary arrangements, as required, to fulfill assigned DoD Lead Agent responsibilities, functions, and authorities (reference DoDD 5101.1).

1.3. This instruction provides DoD-wide guidance on the following: generating, collecting, evaluating, and processing MDS designator and popular name requests, specifying required and essential coordinating organizations, outlining MDS designator and popular name approval authorities, determining “next-in-series” MDS designators, and publishing updates to this instruction and a single DoD-wide list of approved MDS designators and popular names for aerospace vehicles. Additionally, this instruction provides the required evaluation criteria and MDS request package templates, standardized MDS designator symbols, and respective military department points of contacts.

1.4. For the remainder of this instruction, the terms “MDS designator” or “MDS popular name” refer only to the designator or name for military defense aerospace vehicles and/or DoD aerospace vehicles only. Furthermore, the generic term “vehicle” references a military aerospace vehicle unless otherwise described. This instruction does not apply to ground-based systems or vehicles (except for unmanned aircraft control segments related to aerospace vehicles required to be controlled by rated pilots), any hybrid ground/aerospace vehicle in which its intended operational environment is ground-based, nor any specific attachment or subsystem of a military defense aerospace vehicle.

2. Roles and Responsibilities.

2.1. Department of the Air Force:

2.1.1. Secretary of the Air Force (SECAF):

2.1.1.1. Serves as the DoD Lead Agent for designating and naming military aerospace vehicles (reference DoDD 4120.15E).

- 2.1.1.2. Oversees all delegated aspects of the MDS program.
- 2.1.2. Secretary of the Air Force for Public Affairs (SAF/PA):
 - 2.1.2.1. Coordinates on assignment of MDS popular names.
 - 2.1.2.2. Coordinates with the Office of the Assistant Secretary of Defense for Public Affairs (OASD/PA) on assignment of MDS popular names.
 - 2.1.2.3. Ensures public suitability of proposed MDS popular names.
- 2.1.3. Headquarters Air Force Operations, Plans and Requirements (AF/A3):
 - 2.1.3.1. Coordinates on MDS designators and popular names.
- 2.1.4. Headquarters Air Force Logistics, Engineering and Force Protection (AF/A4):
 - 2.1.4.1. Coordinates on MDS designators and popular names.
- 2.1.5. Deputy Chief of Staff for Strategy, Integration and Requirements (AF/A5):
 - 2.1.5.1. Coordinates on MDS designators and popular names.
- 2.1.6. Deputy Chief of Staff for Plans and Programs (AF/A8):
 - 2.1.6.1. Serves on behalf of the DoD Lead Agent's authority for the MDS program (reference HAFMD 1-56).
 - 2.1.6.2. Executes the responsibilities and functions as delegated by the DoD Lead Agent for the MDS program.
 - 2.1.6.3. Serves as the approval authority for MDS designators.
 - 2.1.6.4. Has the authority to delegate any aspect of the MDS program, as appropriate, that would best serve in the capacity of fulfilling MDS program execution.
- 2.1.7. Secretary of the Air Force, General Counsel (SAF/GC):
 - 2.1.7.1. Coordinates on assignment of MDS popular names.
 - 2.1.7.2. Conducts trademark search of proposed MDS popular names.
 - 2.1.7.3. Nothing in **paragraph 2.1.7** or its subparagraphs is inconsistent with HAFMD 1-14, *General Counsel and the Judge Advocate General*.
- 2.1.8. Air Force Directorate of Programs, Program Integration Division (AF/A8PE):
 - 2.1.8.1. Serves as the central point of contact for administrating the MDS program.
 - 2.1.8.2. Serves as the central collection point for MDS designator and popular name requests.
 - 2.1.8.3. Reviews, processes, tracks, and staffs MDS designator and popular name requests.
 - 2.1.8.4. Assigns the "next-in-series" MDS designator (as applicable).
 - 2.1.8.5. Publishes and maintains a DoD-wide single source list of approved MDS designators and popular names (updated monthly, if changes occur).
 - 2.1.8.6. Notifies service Points of Contact (POC) of final request status.

2.1.9. Headquarters, United States Air Force, Office of the Judge Advocate General (AF/JA):

2.1.9.1. Provides legal advice, assistance and litigation support on trademark and copyright laws. Support is provided through the Air Force Legal Operations Agency, Commercial Law and Litigation Directorate (AFLOA/JAQ).

2.1.9.2. Nothing in **paragraph 2.1.9** or its subparagraphs is inconsistent with Headquarters Air Force Mission Directive (HAFMD) 1-14, General Counsel and The Judge Advocate General.”

2.2. Department of the Army:

2.2.1. Headquarters, Army Materiel Command (HQ AMC), G-1 (Safety) AMCPE-SF:

2.2.1.1. Serves as the Army’s single point of contact and is the official requesting agency for the Department of the Army.

2.2.2. Headquarters, Army Materiel Command (HQ AMC), Public Affairs:

2.2.2.1. Reviews and coordinates on MDS popular name requests processed through HQ AMC.

2.3. Department of the Navy, Marine Corps, and Coast Guard: Naval Air Warfare Center Aircraft Division, Systems Standardization Division (Code 412200B120-3):

2.3.1. Serves as the single point of contact and is the official requesting agency for the Department of the Navy, Marine Corps, and Coast Guard.

3. Relationship Between MDS Designator and Popular Name.

3.1. The MDS designator is the official designation for military defense aerospace vehicles. The designator represents a specific category of vehicles for operations, support, and documentation purposes. Popular names are given to the MDS of certain aerospace vehicles to aid in communications and media references. Either reference may be used as a management tool; however, only refer to the MDS designator in official publications and technical manuals.

3.2. The MDS designator of a military aerospace vehicle must be approved prior to or with the approval of the popular name. Requests for both an MDS designator and popular name relating to the same aerospace vehicle may be submitted simultaneously. When submitting requests in separate packages, the MDS designator request must be submitted and accepted prior to submitting the popular name request. Stand-alone requests for an MDS popular name will be rejected if it relates to the following: an unapproved MDS designator, an aerospace vehicle without an MDS designator, or any anticipated MDS designator request that has not yet been submitted and accepted for processing. **(T-0)**

4. MDS Designator.

4.1. Designator Definition:

4.1.1. The MDS designator is an official DoD recognized alpha-numeric designation of a military defense aerospace vehicle. A standardized set of symbols, established by the Secretary of Defense, are used for solely designating military defense aerospace vehicles categorized as: aircraft (standard or non-standard), guided missiles, rockets, probes, boosters, and satellites. The designator describes the aerospace vehicle in two components where the components are separated by a dash. The first component, comprised only of alpha characters, describes the mission of the vehicle. The second component, comprised of alpha-numeric characters, describes the design number and design series of the vehicle.

4.1.2. Standard aircraft MDS designators are comprised of the following: status prefix (optional), modified mission (optional), basic mission (required), design number (required), design series (required).

4.1.3. Non-standard aircraft MDS designators are comprised of the following: status prefix (optional), modified mission (optional), basic mission (required), vehicle type (required), design number (required), design series (required).

4.1.4. Guided missiles, rockets, probes, boosters, and satellite MDS designators are comprised of the following: status prefix (optional), launch environment (required), basic mission (required), design number (required), design series (required).

4.1.5. Only one designator symbol can be selected from each optional and required symbol category. For example, standard aircraft may only have one symbol selected (as applicable) as a status prefix, modified mission, and basic mission. **(T-0)**

4.1.6. For aircrafts (standard and non-standard), modified mission symbols cannot be attached to duplicate basic mission symbols (e.g., “FF-16A”) except for the modified and basic mission symbol “L.” **(T-0)**

4.1.7. Designators not assigned and approved through the process outlined herein, but by the aerospace vehicle’s manufacturer or another non-DoD agency or country is strictly prohibited and is not recognized as an official MDS designator. Furthermore, the current format of the MDS designator was established by the DoD on 18 Sep 1962 with the publishing of AFR 66-11, AR 700-26, and Bureau of Naval Weapons Instruction 13100.7 (a joint service instruction) and therefore the MDS designator format is owned by the DoD. **(T-0)**

4.2. Designator Request Eligibility:

4.2.1. Prior to submitting any MDS designator request package, the following basic criteria must be met: **(T-0)**

4.2.1.1. The request pertains to an aerospace vehicle intended to become part of or already is part of the active DoD inventory.

4.2.1.2. The designator is intended for a permanent aerospace vehicle acquisition. Requests are not accepted for military aerospace vehicles procured to meet Urgent Operational Needs or other temporary/non-permanent acquisition requirements including lease of the vehicle.

4.2.1.3. The request pertains to a new designation or modification/revision to an existing designator. Requests are not accepted for designators in reverse or skipped sequences.

4.3. Procedures for Requesting a Designator:

4.3.1. Preparing the Request.

4.3.1.1. Fully complete the MDS Designator Request Letter (reference [Attachment 6](#)).

4.3.1.2. Request letter paragraph two and attachment one will remain blank or completed notionally until the Program Executive Officer (PEO) or Program Manager (PM) and/or Lead and Using Command/Service Department concurs with requested MDS designator. **(T-0)**

4.3.1.3. Research and determine the “next-in-series” MDS designator to be requested (reference the MDS page on the Defense Technical Information Center (DTIC) DoDTechpedia website, see [Attachment 1](#), or contact AF/A8PE, see [Attachment 5](#)). For standard aircraft, reference the basic mission designator and research the last approved design number and design series of that basic mission designator to determine the “next-in-series” MDS designator. For non-standard aircraft, guided missiles, rockets, probes, boosters, and satellites, reference the basic mission and vehicle type designators and research the last approved design number and design series of that basic mission/vehicle type designator to determine the “next-in-series” MDS designator.

4.3.1.4. Coordinate letter with requesting organization’s respective Military Department point of contact (reference [Attachment 5](#)).

4.3.1.4.1. **(For Air Force)** Coordinate letter through requesting organization’s applicable PEO or PM.

4.3.1.4.2. **(For Air Force PEO/PM)** Coordinate letter through the applicable lead command at the O-6 level.

4.3.1.5. Update request letter paragraph two and attachment one to reflect PEO/PM and/or Lead and Using Command/Service Department concurrence with requested MDS designator.

4.3.2. Submitting the Request.

4.3.2.1. Review the request letter for the following information:

4.3.2.1.1. Complete/accurate MDS designator requested.

4.3.2.1.2. Validate manufacturer, approved popular name (if known), engine data (number, type, and designation), and using department(s).

4.3.2.1.3. Ensure the vehicle description is short, unclassified, and distinctive such that it is suitable for publication.

4.3.2.1.4. Ensure the name, office symbol, email address, and telephone number of the requesting official and agency is listed.

- 4.3.2.2. If designation request is classified, include declassification instructions. Additionally, include an unclassified vehicle description for publication. Classified designation requests must adhere to the process outlined herein and routed to the appropriate organization and/or workflow account on a classified environment or communications system. **(T-0)**
- 4.3.2.3. Send completed, fully coordinated MDS designator request letter to the requesting organization's respective Military Department point of contact.
- 4.3.2.3.1. **(Air Force: PEOs/PMs, and Lead/Using Commands)** Send completed request letter package to AF/A8PE.
- 4.3.2.3.2. **(POCs for Military Departments)** Send completed request letter package to AF/A8PE after receipt, review, and approval from respective military department.
- 4.4. Designator Request Letter Status and Closure:
- 4.4.1. Upon receipt of a fully completed, coordinated MDS designator request letter package, AF/A8PE will acknowledge the requesting department or agency normally within five working days as either "Accepted" or "Rejected."
- 4.4.1.1. If the MDS designator request letter is accepted, the requested designator will be processed by AF/A8PE within 45 calendar days after acceptance. Processing includes designator review and assignment, staffing the designator through AF and SAF at the two-letter levels (O-9), and final approval determination by AF/A8. The organization or agency requesting the designator will only be notified upon approval/disapproval of the designator or if processing exceeds 45 calendar days, whichever occurs first.
- 4.4.1.2. If the MDS designator request letter is rejected, the requesting department or agency will be immediately notified with concise rationale for rejection. Request letter packages requiring revision or modification in order to re-apply for requested designator must be fully re-submitted by the requesting department or agency. AF/A8 or AF/A8PE will not retain partial or rejected request packages. **(T-0)**
- 4.4.2. Request letter acceptance does not constitute approval of the MDS designator. Referencing an unapproved or pending MDS designator in regards to military defense aerospace vehicles in public announcements or other documentation is strictly prohibited. **(T-0)**
- 4.4.3. Upon approval of the MDS designator, AF/A8PE will notify the Service POC, the SECAF, the Chief of Staff of the Air Force (CSAF), and other offices and agencies as appropriate, and provide a courtesy copy of the signed MDS designator approval letter (reference [Attachment 12](#)).
- 4.4.4. AF/A8PE will add/update the MDS designator on the DTIC DoDTechipedia webpage (monthly update, if changes occur) or other appropriate venue for public release (reference [Attachment 1](#)).

5. MDS Popular Name.

5.1. Popular Name Definition:

5.1.1. The MDS popular names characterize military aerospace vehicle missions and aid communications and media references. Names must consist of no more than two distinct words. **(T-0)**

5.1.2. Names assigned or used by the aerospace vehicle's manufacturer are prohibited from use or reference as a DoD MDS popular name without the manufacturer's permission and DoD approval. Manufacturer assigned names may be requested after a trademark review and the manufacturer's permission is granted – all transactions must be routed through local PA offices and documented. **(T-0)**

5.2. Popular Name Guidelines:

5.2.1. Names must be brief. Use no more than two short words. Choose a name that characterizes the mission and operational capabilities of the vehicle. **(T-0)**

5.2.2. Do not request a name that sounds phonetically the same as another (e.g., gryphon, griffin). **(T-0)**

5.2.3. Each MDS with the same basic mission and design number will normally keep the same popular name assigned to the original MDS, regardless of variations in manufacturer, operational use, or change in series. **(T-0)**

5.3. Popular Name Request Eligibility:

5.3.1. Prior to submitting any MDS popular name request package, the following basic criteria must be met:

5.3.1.1. The popular name to be requested is intended for a military aerospace vehicle that has been assigned an MDS designator or that has a designator request currently being processed. **(T-0)**

5.3.1.2. The aerospace vehicle has reached production or has immediate prospects of entering the DoD active inventory. **(T-0)**

5.3.1.3. The popular name does not violate any known brand names, trademarks, or otherwise infringe upon copyright laws. **(T-0)**

5.3.1.4. The popular name is within scope of DoD values and morals such that the name would not reflect negatively upon the DoD and is suitable for public release. **(T-0)**

5.3.1.5. **(Army)** Popular name has been approved by the Army Acquisition Executive in accordance with Department of the Army Pamphlet (DA PAM) 70-3, *Army Acquisition Procedures*.

5.4. Procedures for Requesting a Popular Name:

5.4.1. Preparing the Request.

5.4.1.1. Fully complete the MDS Popular Name Request Letter (reference [Attachment 8](#)).

5.4.1.1.1. Request letter paragraph two and attachment one will remain blank or completed notionally until PEO/PM and/or Lead and Using Command/Service Department concurs with requested MDS popular name.

5.4.1.1.2. Research trademarked names and approved MDS popular names and determine any unused popular names to be requested (reference published list or contact AF/A8PE).

5.4.1.1.3. Include at least three to five popular names, in order of preference, to increase the likelihood that one will clear the review process. No more than one popular name request package can be submitted for the same MDS designator. **(T-0)**

5.4.1.2. Coordinate letter with requesting organization's respective Military Department point of contact (reference **Attachment 5**).

5.4.1.2.1. **(Air Force)** Coordinate letter through requesting organization's applicable PEO or PM.

5.4.1.2.2. **(Air Force PEO/PM)** Coordinate letter through the applicable lead command at the O-6 level.

5.4.1.3. Update request letter paragraph two and attachment one to reflect PEO/PM and/or Lead and Using Command/Service Department concurrence with requested MDS popular name.

5.4.1.4. Coordinate letter with local organization's or agency's general counsel or Public Affairs office.

5.4.2. Submitting the Request.

5.4.2.1. Review the request letter for the following information:

5.4.2.1.1. Verify each requested name is no more than two short words.

5.4.2.1.2. At least three requested names are submitted.

5.4.2.1.3. Verify the requested names are not already listed on the published list.

5.4.2.1.4. Ensure the name, office symbol, email address, and telephone number of the requesting official and agency is listed.

5.4.2.2. Send completed, fully coordinated MDS popular name request letter to the requesting organization's respective Military Department point of contact.

5.4.2.2.1. **(Air Force: PEOs/PMs, and Lead/Using Commands)** Send completed request letter package to AF/A8PE.

5.4.2.2.2. **(POCs for Military Departments)** Send completed request letter package to AF/A8PE after receipt, review, and approval from respective military department.

5.5. Popular Name Request Letter Status and Closure.

5.5.1. Upon receipt of a fully completed, coordinated MDS popular name request letter package, AF/A8PE will acknowledge the requesting department or agency normally within five working days as either "Accepted" or "Rejected."

5.5.1.1. If the MDS popular name request letter is accepted, the requested popular name will be processed within 45 calendar days after acceptance. Processing includes popular name(s) review, staffing the name through HQ AF, and final approval determination by AF/A8. The organization or agency requesting the popular names will only be notified upon approval/disapproval of the selected popular name or if processing exceeds 45 calendar days, whichever occurs first.

5.5.1.1.1. Due to the potential impact that DoD sanctioned popular names can have on public and political views and perceptions of DoD agencies, AF/A8PE will coordinate all popular names with SAF/PA and OASD/PA to ensure public and DoD suitability (reference DoDD 4120.15E). **(T-0)**

5.5.1.1.2. Additionally, due to the potential infringement of popular names on trademarks and copyright laws, all popular names are coordinated with SAF/GCQ. SAF/GCQ coordination and findings during a trademark search on requested popular names is provided to AF/A8PE and AFLOA/JAQ. If litigation based on a potential or current MDS popular name could occur, AF/A8PE or SAF/GCQ shall notify AFLOA/JAQ.” **(T-0)**

5.5.1.2. If the MDS popular name request letter is rejected, the requesting department or agency will be immediately notified with concise rationale for rejection. Request letter packages requiring revision or modification in order to re-apply for requested popular names must be fully re-submitted by the requesting department or agency. AF/A8 or AF/A8PE will not retain partial or rejected request packages. **(T-0)**

5.5.2. Request letter acceptance does not constitute approval of an MDS popular name. Referencing an unapproved or pending MDS popular name in regards to military defense aerospace vehicles in public announcements or other documentation is strictly prohibited.

5.5.3. Upon approval of a selected MDS popular name, AF/A8PE will notify the requesting department or agency other offices and agencies as appropriate, and provide a courtesy copy of the signed MDS popular name approval letter (reference [Attachment 13](#)).

5.5.3.1. AF/A8PE will add/update the MDS popular name on the DTIC DoDTechipedia monthly if changes occur or other appropriate venue for public release (reference [Attachment 1](#)).

6. Retirement/Reactivation of an MDS Designator Popular Name.

6.1. MDS Designator or Popular Name Retirement Request Eligibility:

6.1.1. One of the following conditions applies:

6.1.1.1. The vehicle’s MDS designator and/or popular name is currently active/approved.

6.1.1.2. All vehicles within a specific MDS designator and/or popular name have been retired from the service’s (or services’) inventor(ies).

6.1.1.3. All vehicles within a specific MDS designator and/or popular name will be retired from the service’s (or services’) inventory(ies) within 90 calendar days.

6.1.2. The Military Department(s) have requested or approved the request to retire the MDS designator and/or popular name.

6.1.2.1. **(Air Force: PEOs/PMs, and Lead/Using Commands)** The PEO or PM, along with coordination of the respective lead and/or using command, has approved/concurred with a requirement to retire the designator and/or name.

6.1.2.2. **(POCs for Military Departments)** The respective Military Department or DoD agency has approved/concurred with a requirement to retire the designator and/or name.

6.2. MDS Designator or Popular Name Reactivation Request Eligibility:

6.2.1. One of the following conditions apply:

6.2.1.1. The vehicle's MDS designator and/or popular name is currently retired.

6.2.1.2. All vehicles have been returned to their retired MDS and popular name (if applicable) or vehicles have been modified to a retired MDS and popular name (if applicable).

6.2.1.3. All vehicles will be returned to its retired MDS and popular name (if applicable) or vehicles will be modified to a retired MDS and popular name (if applicable) within 90 calendar days.

6.2.2. , The Military Department(s) have requested or approved the request to reactivate the MDS designator and/or popular name.

6.2.2.1. **(Air Force: PEOs/PMs, and Lead/Using Commands)** The PEO or PM, along with coordination of the respective lead and/or using command, has approved/concurred with a requirement to reactivate the designator and/or name.

6.2.2.2. **(POCs for Military Departments)** The respective Military Department or DoD agency has approved/concurred with a requirement to reactivate the designator and/or name.

6.3. Procedures for Retiring or Reactivating an MDS Designator or Popular Name:

6.3.1. Complete the MDS Retirement Request Letter (reference [Attachment 10](#)).

6.3.2. **(Air Force, PEOs/PMs, and Lead/Using Commands)** Send completed request letter package to AF/A8PE.

6.3.3. **(POCs for Military Departments)** Send completed request letter package to AF/A8PE after receipt, review, and approval from respective military department.

6.4. Retirement or Reactivation Request Letter Status and Closure:

6.4.1. Upon receipt of a fully completed, coordinated MDS retirement or reactivation request letter package, AF/A8PE will acknowledge the requesting department or agency normally within five working days as either "MDS Retirement Request Received" or "MDS Reactivation Request Received."

6.4.2. For MDS retirement requests, AF/A8PE transfers the designator and/or popular name from an active to a retired status, and removes the designator and/or popular name from published list (monthly update, if changes occur).

6.4.3. MDS designators and/or popular names that have been retired cannot be used again to identify another aerospace vehicle.

6.4.4. For MDS reactivation requests, AF/A8PE transfers the designator and/or popular name from a retired status to an active status, and adds the designator and/or popular name to the published list (monthly update, if changes occur).

7. Publication of Approved MDS Designators and Popular Names.

7.1. DTIC DoDTechipedia (reference [Attachment 1](#)) lists approved MDS designators for all military aerospace vehicles in the DoD inventory. The list displays the approved MDS designator, manufacturer(s), approved popular name (if any), engine data, using department(s), and a brief description of the vehicle.

7.2. AF/A8PE provides monthly updates (only if changes have occurred) to DoD for inclusion in the next update of the published list. Updates include any additions/changes to approved MDS designators and popular names as of the last day of the month.

7.3. The DTIC DoDTechipedia (reference [Attachment 1](#)) is the primary approved MDS designator and popular name sources for all DoD Components. Other Federal Agencies and the public may view or obtain an electronic tabular list by visiting data.af.mil.

7.4. DoD 4120.15-L, *Model Designation of Military Aerospace Vehicles*, will no longer be maintained as the primary source of approved MDS designators and popular names. However, other Federal Agencies and the public may obtain the latest version from data.af.mil.

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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Air Force Policy Directive 16-4, *Accounting for Aerospace Vehicles at Units and Installations*, 20 November 2018

Air Force Manual 33-363, *Management of Records*, 1 December 2015

Department of Defense Directive 4120.15E, *Designating and Naming Military Aerospace Vehicles*, 29 November 2004

Department of Defense 4120.15-L, *Model Designation of Military Aerospace Vehicles*, 12 May 2004

HAF Mission Directive 1-56, *Deputy Chief of Staff Strategic Plans and Requirements*, 28 January 2016

Department of the Army Pamphlet (DA PAM) 70-3, *Army Acquisition Procedures*

DTIC DoDTechipedia,

<https://www.dodtechipedia.mil/dodwiki/display/techipedia/MDS%20-%20Mission%20Design%20series>

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

A1J1—Navy Program Executive Officers

A8PE—Air Force Directorate of Programs, Program Integration Division

AF—Air Force

AF/JA—Headquarters, United States Air Force, Office of the Judge Advocate General

AFI—Air Force Instruction

AFLOA/JAQ—Air Force Legal Operations Agency, Commercial Law and Litigation Directorate

AFMAN—Air Force Manual

AMC—Army Materiel Command

AR—Army Regulation

CSAF—Chief of Staff of the Air Force

COMNAVAIRSYSCOM—Commander, Naval Air Systems Command

DA PAM—Department of the Army Pamphlet

DCS—Deputy Chief of Staff

DoD—Department of Defense

DoDD—Department of Defense Directive

DSN—Defense Switched Network

DTIC—Defense Technical Information Center

FKA1A—Navy distribution list for: Deputy Commanders, Assistant Commanders, Comptroller, Command Special Assistants, Designated Program Managers, Directorate Directors, and Office and Division Directors

FKR—COMNAVAIRSYSCOM Shore Activities

FSC—Federal Supply Class

HAF—Headquarters Air Force

HAF MD—Headquarters, Air Force Mission Directive

HQ—Headquarters

MDS—Mission Design Series

NAVAIRINST—Naval Air Systems Command Instruction

OASD/PA—Office of the Assistant Secretary of Defense, Public Affairs
OPR—Office of Primary Responsibility

PEO—Program Executive Officer

PM—Program Manager

POC—Point of Contact

RPA—Remotely Piloted Aircraft

SAF/GC—Secretary of the Air Force, General Counsel

SAF/PA—Secretary of the Air Force, Public Affairs

SECAF—Secretary of the Air Force

STOL—Short Takeoff and Landing

UA—Unmanned Aircraft

UAS—Unmanned Aircraft System

UAV—Unmanned Aerial Vehicle

UCAV—Unmanned Combat Aerial Vehicle

USAF—United States Air Force

VTOL—Vertical Takeoff and Landing

Terms

Aerospace Vehicle—Includes aircraft in Federal Supply Class (FSC) 1510 and 1520, gliders in FSC 1540, UAVs and aerial target drones in FSC 1550, guided missiles in FSC 1410, and spaces systems (boosters, satellites/upper stages, and missiles).

Aircraft—Vehicle designed primarily for flight in the atmosphere. It can carry a crew and payload (passengers; cargo; command, control, and communications systems; weapons, etc.).

Booster—An initial or auxiliary propulsion system, which travels with a missile or aircraft, and which may or may not separate from the parent craft when its impulse has been delivered. A booster system may contain, or consist of, one or more units.

Guided Missile—An unmanned vehicle moving above the surface of the earth, whose trajectory or flight path is capable of being altered by an external or internal mechanism.

Mission Design Series (MDS)—The official designation for aerospace vehicles used to represent a specific category of aerospace vehicles for operations, support, and documentation purposes.

Nonstandard Vehicle—An aerospace vehicle with a vehicle type designator that must be accompanied by a basic mission or modified mission symbol.

Popular Name—A plain language name applied to the mission design series of certain aerospace vehicles, which aids communications and media references.

Probe—A non-orbital, instrumented vehicle designed to penetrate the aerospace environment, commonly used for collecting meteorological data.

Rocket—A thrust-producing system that derives its thrust from ejection of hot gases generated from material carried in the system, not requiring intake of air or water (rockets may be either of liquid or solid propellant types).

Satellite—A vehicle placed in various orbits to collect and transmit various types of data for multiple purposes.

Unmanned Aircraft (UA)—An aircraft or balloon that does not carry a human operator and is capable of flight under remote control or autonomous programming. UAs may also be referred to as RPA, UAS (aerospace vehicle component only), UAV or UCAV.

Unmanned Aerial Vehicle (UAV)—A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or is piloted remotely, can be expendable or recoverable, and carries a non-lethal payload. Ballistic or semi ballistic vehicles, cruise missiles, and artillery projectiles are not considered UAVs.

Unmanned Aircraft System (UAS)—A system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft. **Note:** This AFI applies to military defense aerospace vehicles only; the term “UAS” is only provided here for informative purposes – a “UAS” is not permitted to receive a designation, only the aerospace vehicle component of that system.

Unmanned Combat Aerial Vehicle (UCAV)—Same definition as UAV except that it carries a lethal payload.

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Navy:—FKA1A (Deputy Commanders, Assistant Commanders, Comptroller, Command Special Assistants, Designated Program Managers, Directorate Directors, and Office and Division Directors); FKR.

Copy to—Navy; A1J1A; A1J1B; A1J1C.

Attachment 2

STANDARDIZED MDS DESIGNATOR POSITION DESCRIPTIONS

A2.1. MDS Designator Position Descriptions:

A2.1.1. Status Prefix:

A2.1.1.1. Is an optional designator symbol which (if used) indicates a non-standard use of an aerospace vehicle (e.g., test, experimental, prototype, etc.).

A2.1.1.2. **(For standard aircraft and non-standard aircraft)** It will appear to the immediate left of the modified mission symbol or basic mission symbol for the aircraft.

A2.1.1.3. **(For rockets and missiles)** It will appear to the immediate left of the launch environment symbol or basic mission symbol for rockets and missiles.

A2.1.1.4. For example, in the designator YF-16A, the status prefix symbol “Y” denotes an F-16A prototype.

A2.1.2. Modified Mission:

A2.1.2.1. Is an optional designator symbol used in conjunction with standard or non-standard aircraft only. It identifies modifications to the basic mission of an aircraft.

A2.1.2.2. It will appear to the immediate left of the basic mission symbol. The use of modified mission symbol that are similar to the basic mission symbol is strictly prohibited (e.g., FF-16A) except for the symbol “L.”

A2.1.2.3. For example, in the designator AT-38B, the modified mission symbol “A” identifies a T-38B modified for attack.

A2.1.3. Launch Environment:

A2.1.3.1. Is a required designator symbol for rockets and missiles only. It identifies the launch environment or platform parameter.

A2.1.3.2. It will appear to the immediate left of the basic mission symbol.

A2.1.3.3. For example, in the designator LGM-118A, the launch environment symbol “L” indicates the aerospace vehicle is a silo-launched missile.

A2.1.4. Basic Mission:

A2.1.4.1. Is a required designator symbol for all standard and non-standard aircraft and all guided missiles, rockets, probes, boosters, and satellites. It identifies the primary function and capability of an aerospace vehicle and is the initial symbol assigned to that series.

A2.1.4.2. **(For standard aircraft)** It will appear to the immediate left of the design number separated by a dash. For example, in the designator F-16A, the basic mission symbol “F” denotes fighter.

A2.1.4.3. **(For nonstandard aircraft, guided missiles, rockets, probes, boosters, and satellites)** It will appear to the immediate left of the vehicle type symbol. For example, in the designator LGM-118A, the basic mission symbol “G” indicates the guided missile is used for surface attack.

A2.1.5. **Vehicle Type:**

A2.1.5.1. Is a required designator symbol for all non-standard aircraft (e.g., helicopters, vertical takeoff and landing (VTOL) vehicles, spaceplanes, etc.), guided missiles, rockets, probes, boosters, and satellites only. A basic mission or modified mission symbol must accompany the vehicle type symbol. **(T-0)**

A2.1.5.2. It will appear to the immediate left of the design number, separated by a dash.

A2.1.5.3. For example, in the designator CH-53A, the vehicle type symbol “H” indicates the aerospace vehicle is a helicopter with a basic mission of transport “C.”

A2.1.6. **Design Number:**

A2.1.6.1. Is a required designator numeric symbol for all standard and non-standard aircraft and all guided missiles, rockets, probes, boosters, and satellites. It identifies major design changes within the same basic mission. Design numbers run consecutively from “1” to “999” and will appear to the immediate right of the basic mission or vehicle type symbols, separated by a dash.

A2.1.6.1.1. In the event that a design number of an aerospace vehicle reaches “999”, the design number range will be expanded to “9999” and future design numbers will be assigned accordingly. The designator character positions to the right of the dash separator will be expanded to accommodate the increased design number range.

A2.1.6.1.2. AF/A8PE reserves the authority to skip design number at discretion.

A2.1.6.2. It will appear to the immediate right of the basic mission or vehicle type symbols, separated by a dash.

A2.1.6.3. For example, in the designator F-16A, the design number “16” represents the sixteenth approved MDS designator for an aircraft with a fighter mission under the current MDS reporting system.

A2.1.7. **Series:**

A2.1.7.1. Is a required designator symbol for all standard and non-standard aircraft and all guided missiles, rockets, probes, boosters, and satellites. It identifies the production model of a particular design number and later models representing major modifications that significantly alter the aerospace vehicle’s systems, components, or change the logistics support of the vehicle.

A2.1.7.2. It will appear to the immediate right of the design number and follows a consecutive assignment starting with “A.” To avoid confusion with the design number, the use of letters “I” and “O” for this symbol are prohibited.

A2.1.7.3. At the end of the series symbol “Z”, the next sequence will be to advance the design number to the next consecutive unused number and begin with series symbol “A.”

A2.1.7.4. For example, in the designator F-16C, the *series* symbol “C” indicates the third production model of the F-16.

A2.1.8. Aerospace Vehicle Configuration or Specification:

A2.1.8.1. The following descriptions for configuration, block, and serial numbers further identify configuration or specific vehicles, but are not part of an MDS designator. Assignments of configuration, block, and serial numbers do not require coordination/approval by AF/A8.

A2.1.8.1.1. Configuration or Component Number:

A2.1.8.1.1.1. Denotes configuration changes that affect performance, tactics, or integral components of a weapon system which require the same operations or logistics reporting as the aerospace vehicle.

A2.1.8.1.1.2. It will appear to the immediate right of the series symbol, separated by a dash. Each Military Department determines its own method for assigning configuration numbers.

A2.1.8.1.2. Block Number: Denotes a production group of identically configured aircraft within a particular design series. The Military Departments may reserve intermediate block numbers for field modifications.

A2.1.8.1.3. Serial Number: Identifies a specific aerospace vehicle. Military Departments determine the method for assigning serial numbers.

A2.2. MDS Designator Positions:

A2.2.1. For standard aircraft, an MDS designator may range between three to seven characters total. Immediately to the left of the dash, symbols may range between one to three. Immediately to the right of the dash, symbols may range between two and four.

A2.2.2. In order to provide a consistent conception of MDS designator positions for standard aircraft, the following table will assume a seven character designator in which any unused positions are set to “0”:

Table A2.1. MDS Designator Positions for Standard Aircraft.

Position:	1	2	3	-	4	5	6	7
Symbol:				-				
	Status Prefix (Optional)	Modified Mission (Optional)	Basic Mission (Required)	-	Design Number (Required) (Hundreds)	Design Number (Required) (Tens)	Design Number (Required) (Ones)	Series (Required)

Table A2.2. Notional Examples of MDS Designators for Standard Aircraft.

Position:	1	2	3	-	4	5	6	7
F-16A	0	0	F	-	0	1	6	A
AT-38B	0	A	T	-	0	3	8	B
XWC	X	W	C	-	1	3	0	J
- 130J				-				
YF-22A	Y	0	F	-	0	2	2	A

A2.2.3. For non-standard aircraft, an MDS designator may range between four to eight characters total. Immediately to the left of the dash, symbols may range between two to four. Immediately to the right of the dash, symbols may range between two and four.

A2.2.4. In order to provide a consistent conception of MDS designator positions for non-standard aircraft, the following table will assume an eight character designator in which any unused positions are set to “0”:

Table A2.3. MDS Designator Positions for Non-Standard Aircraft.

Position:	1	2	3	4	-	5	6	7	8
Symbol:	_____				-				
	Status Prefix (Optional)	Modified Mission (Optional)	Basic Mission (Required)	Vehicle Type (Required)	-	Design Number (Required) (Hundreds)	Design Number (Required) (Tens)	Design Number (Required) (Ones)	Series (Required)

Table A2.4. Notional Examples of MDS Designators for Non-Standard Aircraft.

Position:	1	2	3	4	-	5	6	7	8
HH-53A	0	H	0	H	-	0	5	3	A
GMQ - 1B	G	M	0	Q	-	0	0	1	B
YQRQ - 5F	Y	Q	R	Q	-	0	0	5	F

A2.2.5. For guided missiles, rockets, probes, boosters, and satellites, an MDS designator may range between four to eight characters total. Immediately to the left of the dash, symbols may range between two to four. Immediately to the right of the dash, symbols may range between two and four.

A2.2.6. In order to provide a consistent conception of MDS designator positions for guided missiles, rockets, probes, boosters, and satellites, the following table will assume an eight character designator in which any unused positions are set to “0”:

Table A2.5. MDS Designator Positions for Guided Missiles, Rockets, Probes, Boosters, and Satellites.

Position:	1	2	3	4	-	5	6	7	8
Symbol:	_____				-				
	Status Prefix (Optional)	Launch Environment (Rockets & Missiles Only)	Basic Mission (Required)	Vehicle Type (Required)	-	Design Number (Required) (Hundreds)	Design Number (Required) (Tens)	Design Number (Required) (Ones)	Series (Required)

Table A2.6. Notional Examples of MDS Designators for Guided Missiles, Rockets, Probes, Boosters, and Satellites.

Position:	1	2	3	4	-	5	6	7	8
AGM									
- 84N	0	A	G	M	-	0	8	4	N
LS-15A	0	L	0	S	-	0	1	5	A
DATM									
- 86B	D	A	T	M	-	0	8	6	B

Attachment 3

STANDARDIZED MDS DESIGNATOR SYMBOL DESCRIPTIONS FOR AIRCRAFT

A3.1. The following table outlines the symbols used in aircraft (standard and non-standard) MDS designators:

Table A3.1. Standardized MDS Designator Symbols for Aircraft.

Designator Symbols for Non-Standard Aircraft (columns 1-4):			
Designator Symbols for Standard Aircraft (columns 1-3):			Vehicle Type
<u>Status Prefix</u>	<u>Modified Mission</u>	<u>Basic Mission</u>	
e – Digitally Developed	A – Attack	A – Attack	D – UAV Control Segment
G – Permanently Grounded	C – Transport	B – Bomber	G – Glider
J – Special Test (Temporary)	D – Director	C – Transport	H – Helicopter
N – Special Test (Permanent)	E – Special Electronic Installation	E – Special Electronic Installation	Q – Unmanned Aircraft (UA)
X – Experimental	F – Fighter	F – Fighter	S – Spaceplane
Y – Prototype	H – Search/Rescue/MEDEVAC	L – Laser	V – VTOL/STOL
Z – Planning	K – Tanker	O – Observation	Z – Lighter-Than-Air Vehicle
	L – Cold Weather	P – Patrol	
	M – Multi-Mission	R – Reconnaissance	
	O – Observation	S – Anti-Submarine	
	P – Patrol	T – Trainer	
	Q – Drone	U – Utility	
	R – Reconnaissance	X – Research	
	S – Anti-Submarine		
	T – Trainer		
	U – Utility		
	V – Staff		
	W – Weather		

Table A3.2. Notional Example of an Aircraft MDS Designator.

Aircraft MDS Designator:	YEH-60B
Status Prefix:	“Y” – Prototype
Basic Mission:	“E” – Electronics
Vehicle Type:	“H” – Helicopter
Design Number:	“60” – 60 th design
Series:	“B” – 2 nd version of the design

A3.2. List of aircraft (standard and non-standard) status prefix symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A3.3. List of Aircraft Standard and Non-Standard Status Prefix Symbol.

e (Digitally Developed)—Aircraft that are engineered in a virtual environment.

G (Permanently Grounded)—Aircraft that have been permanently grounded (may be used for ground training).

J (Temporary Special Test)—Aircraft in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate a test.

N (Permanent Special Test)—Aircraft in special test program by authorized activities or on bailment contract where the configuration changes so drastically that returning to the original operational configuration is impractical or uneconomical.

X (Experimental)—Aircraft in a developmental or experimental stage.

Y (Prototype)—A model suitable for evaluation of design, performance, and production potential.

Z (Planning)—Aircraft in the planning or predevelopment stage.

A3.3. List of aircraft (standard and non-standard) modified mission symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A3.4. List of Aircraft Standard and Non-Standard Modified Mission Symbol.

A (Attack)—Aircraft modified to find, attack, and destroy enemy targets using conventional or special weapons. This symbol also describes aircraft used for interdiction and close air support missions.

C (Transport)—Aircraft modified to carry personnel, cargo, or both.

D (Director)—Aircraft modified for controlling drone aircraft or missiles.

E (Special Electronic Installation)—Aircraft modified with electronic devices for one or more of the following missions: (1) Electronic warfare, (2) Airborne early warning radar, (3) Airborne command and control, including communications relay, and (4) Tactical data communications link for all non-autonomous modes of flight.

F (Fighter)—Aircraft modified to intercept and destroy other aircraft or missiles.

H (Search and Rescue/MEDEVAC)—Aircraft modified for search and rescue and/or MEDEVAC missions.

K (Tanker)—Aircraft modified to refuel other aircraft in flight.

L (Cold Weather)—Aircraft modified for operation in Arctic and Antarctic regions. Includes skis, special insulation, and other equipment for extreme cold weather operations.

M (Multi-Mission)—Aircraft modified to perform several different missions.

O (Observation)—Aircraft modified to observe (through visual or other means) and report tactical information concerning composition and disposition of forces.

P (Patrol)—Long range, all weather, multiengine aircraft that operate from land or water bases modified for independent antisubmarine warfare, maritime reconnaissance, and mining.

Q (Drone)—A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or is piloted remotely, can be expendable or recoverable, and can carry lethal or non-lethal payloads. Ballistic or semi ballistic vehicles, cruise missiles, and artillery projectiles are not considered drones.

R (Reconnaissance)—Aircraft modified for photographic or electronic reconnaissance missions.

S (Antisubmarine)—Aircraft modified to find, identify, attack, and destroy enemy submarines.

T (Trainer)—Aircraft modified for training purposes.

U (Utility)—Aircraft modified to perform multiple missions such as battlefield support, localized transport, and special light missions.

V (Staff)—Aircraft modified to provide support for the President or Vice President of the United States.

W (Weather)—Aircraft modified and equipped for meteorological missions.

A3.4. List of aircraft (standard and non-standard) basic mission symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A3.5. List of Aircraft Standard and Non-Standard Basic Mission Symbol.

A (Attack)—Aircraft designed to find, attack, and destroy enemy land or sea targets using conventional or special weapons. This symbol also applies to aircraft used for interdiction and close air support missions.

B (Bomber)—Aircraft designed for bombing enemy targets.

C (Transport)—Aircraft designed primarily to carry personnel, cargo, or both.

E (Special Electronic Installation)—Aircraft designed for one or more of the following missions: (1) Electronic warfare, (2) Airborne early warning radar, (3) Airborne command and control including communications relay, and (4) Tactical data communications link for all non- autonomous modes of flight.

F (Fighter)—Aircraft designed to intercept and destroy other aircraft or missiles. Includes multipurpose aircraft also designed for ground support missions such as interdiction and close air support.

L (Laser)—Vehicle designed for employing a high-energy laser weapon.

O (Observation)—Aircraft designed to observe (through visual or other means) and report tactical information concerning composition and disposition of forces.

P (Patrol)—Long range, all weather, multiengine aircraft operating from land or water bases designed for independent antisubmarine warfare, maritime reconnaissance, and mining.

R (Reconnaissance)—Aircraft designed for photographic or electronic reconnaissance missions.

S (Antisubmarine)—Aircraft designed to find, detect, identify, attack, and destroy enemy submarines.

T (Trainer)—Aircraft designed for training purposes.

U (Utility)—Aircraft designed to perform multiple missions such as battlefield support, localized transport, and special light missions. Included are aircraft designed for small payloads.

X (Research)—Aircraft designed for testing highly experimental configurations. These aircraft are not generally intended for use as operational aircraft.

A3.5. List of aircraft (standard and non-standard) vehicle type symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A3.6. List of Aircraft Standard and Non-Standard Vehicle Type Symbol.

D (Unmanned Aircraft Control Segment)—Control Segment for unmanned aircraft (UA) required to be controlled by rated pilots.

G (Glider)—Fixed wing aircraft flown by using air currents to keep it aloft.

H (Helicopter)—Rotary wing aircraft (deriving lift from a rotating lifting surface).

Q (Unmanned Aircraft)—An UA is an aircraft or balloon that does not carry a human operator and is capable of flight under remote control or autonomous programming. UAs may also be referred to as RPA, UAS (aerospace vehicle component only), UAV or UCAV.

S (Spaceplane)—Aircraft designed to travel above the earth's atmosphere and return to earth in support of space operations.

V (VTOL and STOL)—Aircraft designed to take off and land vertically or in a very short distance.

Z (Lighter-Than-Air-Vehicle)—Non-rigid or semi-rigid aircraft that achieves its primary lift through use of hot gases or lighter-than-air gases (includes blimps and balloons).

Attachment 4

STANDARDIZED MDS DESIGNATOR SYMBOL DESCRIPTIONS FOR GUIDED MISSILES, ROCKETS, PROBES, BOOSTERS, AND SATELLITES

A4.1. The following table outlines the symbols used in guided missile, rocket, probe, booster, and satellite MDS designators:

Table A4.1. Standardized MDS Designator Symbols for Guided Missiles, Rockets, Probes, Boosters, and Satellites.

Designator Symbols for Guided Missiles, Rockets, Probes, Boosters, and Satellites (columns 1-4):			
<u>Status Prefix</u>	<u>Launch Environment</u>	<u>Basic Mission</u>	<u>Vehicle Type</u>
e – Digitally Developed	A – Air	C – Transport	B - Booster
C – Captive	B – Multiple	D – Decoy	M – Guided Missile
D – Dummy	C – Coffin	E – Electronic / Communications	N - Probe
J – Special Test (Temporary)	F – Individual	G – Surface Attack	R - Rocket
N – Special Test (Permanent)	G – Surface	I – Aerial / Space Intercept	S – Satellite
X – Experimental	H – Silo Stored	L – Launch Detection / Surveillance	
Y – Prototype	L – Silo Launched	M – Scientific / Calibration	
Z – Planning	M – Mobile	N – Navigation	
	P – Soft Pad	Q – Drone	
	R – Ship	S – Space Support	
	S – Space	T – Training	
	U – Underwater	U – Underwater Attack	
		W – Weather	

Table A4.2. Notional Example of a Missile MDS Designator.

Missile MDS Designator:	BGM-109G
Launch Environment:	“B” – Multiple
Basic Mission:	“G” – Surface Attack
Vehicle Type:	“M” – Guided Missile
Design Number:	“109” – 109 th design
Series:	“G” – 7 th version of the design

A4.2. List of guided missile, rockets, probes, boosters, and satellite status prefix symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A4.3. List of Guided Missile, Rockets, Probes, Boosters, and Satellite Status Prefix Symbol.

<p>e (Digitally Developed)—Vehicle that is engineered in a virtual environment.</p> <p>C (Captive)—Flyable inert vehicle designed for carry on a launch platform, but incapable of being fired. May contain active guidance and control section electronics for aircrew target acquisition, but warhead and engine are normally inert or ballasted.</p> <p>D (Dummy)—Non-flyable inert vehicle designed for load crew training. Guidance and control section, warhead, and engine are normally inert or ballasted.</p> <p>J (Temporary Special Test)—Vehicle in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate tests.</p> <p>N (Permanent Special Test)—Vehicle in special test programs by authorized activities or on bailment contract whose configuration changes so drastically that returning to its original operational configuration is beyond practical or economical limits.</p> <p>X (Experimental)—Vehicle in a development or experimental stage.</p> <p>Y (Prototype)—A model for evaluation of design, performance, and production potential.</p> <p>Z (Planning)—Vehicle in the planning or predevelopment stage.</p>
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A4.3. List of guided missile, rockets, probes, boosters, and satellite launch environment symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A4.4. List of Guided Missile, Rockets, Probes, Boosters, and Satellite Launch Environment Symbol.

A (Air)—Vehicle launched in the air by another vehicle.

B (Multiple)—Vehicle capable of being launched from more than one environment.

C (Coffin)—Vehicle stored horizontally or at less than a 45-degree angle in a protective enclosure (regardless of structural strength) and launched from ground level.

F (Individual)—Vehicle hand carried and launched by combat personnel.

G (Surface)—Vehicle launched from a runway or the ground.

H (Silo Stored)—Vehicle vertically stored but not launched from below ground level.

L (Silo Launched)—Vehicle vertically stored and launched from below ground level.

M (Mobile)—Vehicle launched from a ground vehicle or movable platform.

P (Soft Pad)—Vehicle partially protected or unprotected in storage and launched from ground level.

R (Ship)—Vehicle launched from a surface vessel (ship or barge).

S (Space)—Vehicle launched from an aerospace vehicle that operates outside the earth's atmosphere.

U (Underwater)—Vehicle launched from a submarine or other underwater device.

A4.4. List of guided missile, rockets, probes, boosters, and satellite basic mission symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A4.5. List of Guided Missile, Rockets, Probes, Boosters, and Satellite Basic Mission Symbol.

C (Transport)—Vehicle designed to carry personnel, cargo, command, control, and communications equipment or weapons systems.

D (Decoy)—Vehicle designed or modified to confuse, deceive, or divert enemy defenses by simulating an attack vehicle.

E (Electronic/Communications)—Vehicle designed or modified with electronic equipment for communications, countermeasures, electronic radiation sounding, or other electronic recording or relay missions.

G (Surface Attack)—Vehicle designed to destroy enemy land or sea targets.

I (Aerial/Space Intercept)—Vehicle designed to intercept aerial/space targets in defensive or offensive roles.

L (Launch Detection/Surveillance)—Vehicle designed for the systematic observation of aerospace for the purpose of detecting, tracking, and characterizing objects, events, and phenomena associated with satellites, in flight missiles, including intrusion detection.

M (Scientific/Calibration)—Vehicle designed for the collection, evaluation, analysis, and interpretation of scientific and technical information.

N (Navigation)—Vehicle designed to provide data for navigation purposes.

Q (Drone)— A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or is piloted remotely, can be expendable or recoverable, and can carry lethal or non-lethal payloads. Ballistic or semi ballistic vehicles, cruise missiles, and artillery projectiles are not considered drones.

S (Space Support)—Vehicle designed to ensure maintainability of space control and support of terrestrial forces. Includes activities such as launching and deploying space vehicles, maintaining and sustaining space vehicles while in orbit and recovering space vehicles if required.

T (Training)—Vehicle designed or permanently modified for training purposes.

U (Underwater Attack)—Vehicle designed to detonate underwater and to destroy submarines or other underwater targets.

W (Weather)—Vehicle designed to observe, record, or relay meteorological data.

A4.5. List of guided missile, rockets, probes, boosters, and satellite vehicle type symbol descriptions (in consecutive order; includes symbol, short title, and description):

Table A4.6. List of Guided Missile, Rockets, Probes, Boosters, and Satellite Vehicle Type Symbol.

B (Booster)—A primary or auxiliary propulsion system used as a source of thrust for a satellite, missile, or aerospace vehicle. A booster system may consist of one or more units.

M (Guided Missile)—An unmanned vehicle that flies in and above the atmosphere and an external or internal guidance system controls its trajectory or flight path.

N (Probe)—Non-orbital, instrumented vehicle designed to penetrate the aerospace environment. Commonly used for collection of meteorological data.

R (Rocket)—A vehicle propelled by an engine that derives its thrust from ejection of hot gases generated by liquid or solid propellants carried in the vehicle. A rocket has no guidance (internal or external) after launch.

S (Satellite)— A vehicle placed in various orbits to collect and transmit various types of data for multiple purposes.

Attachment 5**MILITARY DEPARTMENT POINTS OF CONTACT MAILING ADDRESSES****Figure A5.1. Air Force and DoD.**

AF/A8PE
Program Integration Division
1070 Air Force Pentagon
Washington, D.C. 20330-1070
Email: usaf.pentagon.af-a8.mbx.af-a8pe-workflow@mail.mil

Figure A5.2. Army.

HQ AMC
G-1 (Safety)
Attn: AMCPE-SF
4400 Martin Road
Redstone Arsenal, AL 35898-5000

Figure A5.3. Department of the Navy and Coast Guard.

Naval Air Warfare Center Aircraft Division
Systems Standardization Division
Code 4L8000B120-3
Highway 547
Lakehurst, NJ 08733-5100
ATTN: Team Leader, Nomenclature Program Team

Attachment 6

MDS DESIGNATOR REQUEST LETTER TEMPLATE

Figure A6.1. MDS DESIGNATOR REQUEST LETTER TEMPLATE.

<p>(Use Official Letterhead)</p> <p style="text-align: right;">DD MMM YYYY</p> <p>MEMORANDUM FOR AF/A8PE</p> <p>FROM: <i>Place your information here</i></p> <p>SUBJECT: Mission Design Series (MDS) for (aircraft/missile/etc.).</p> <ol style="list-style-type: none"> 1. Request approval to assign MDS to aerospace vehicle (aircraft/missile/etcetera). 2. Reference PEO/PM and/or Lead and Using Command/Service Department concurrence attached to this request. This attachment should be fairly detailed in describing the requirements of the PEO/PM/Using Command and the description - in greater detail than in paragraph 3.g. below - of the items(s) being requested for MDS approval. The attached letter should not only request the MDS officially or give concurrence to, but should expound on the items in detail listed in paragraph 3, below. Normally, it is not longer than one page. It should also be on the Official Letterhead, list a point-of-contact, and be signed as well. Both of these letters define the position of the service or other department concerning the MDS, in case there is any litigation. 3. The following information is offered for inclusion in DoD publication: <ol style="list-style-type: none"> a. MDS: (reference Attachment 2, Attachment 3, Attachment 4) b. Manufacturer: Self-explanatory c. Popular Name: List "None" if it does not have an officially approved popular name. d. Using Service: Self-explanatory e. Engine/Motor Type: Self-explanatory f. Number of Engines: Self-explanatory g. Description: Keep it short/simple; this is what will go in DoD publication. 4. Any questions can be directed to point of contact name, phone number (DSN and or commercial), and email address. <div style="text-align: right; margin-top: 20px;"> <p>Signatu re NAME Title (area of responsibility)</p> </div> <p>3 Attachments:</p> <ol style="list-style-type: none"> 1. PEO/PM and/or Lead and Using Command Request/Concurrence 2. Comparison Matrix 3. Photographs of Vehicle

Attachment 7

SAMPLE (NOTIONAL) MDS DESIGNATOR REQUEST LETTER

Figure A7.1. Sample (Notional) MDS Designator Request Letter.

(Official Letterhead)	
	1 Aug 19
MEMORANDUM FOR AF/A8PE	
FROM: ASC/WISL	
SUBJECT: Mission Design Series (MDS) for AC-130H Recapitalization Program	
1. Request approval to assign MDS to aerospace vehicle AC-130H of “AC-130J” to Air Force Special Operations Command’s (AFSOC) recapitalized gunship aircraft.	
2. AFSOC concurrence memorandum is attached.	
3. The following information is offered for inclusion in DoD publication:	
a. MDS:	AC-130J
b. Manufacturer:	Lockheed Martin
c. Popular Name:	Spectre II
d. Using Service:	USAF, USSOCOM
e. Engine/Motor Type:	Rolls-Royce AE2100D3
f. Number of Engines:	4
g. Description:	This aircraft performs close air support, air interdiction, and armed reconnaissance missions. Modifications have been made to mission management center, electro-optical/infrared sensors, fire control equipment, small precision guided munitions, and one side-firing gun and associated munitions storage system.
4. Any questions can be directed to Ms. Jane Smith or Mr. John Smith, DSN 123-4567 or COMM 000-123-4567, jane.smith@afb.af.mil or john.smith@afb.af.mil.	
//Signed,jds,1 Aug 19, 1200// J. D. SMITH Chief, Systems Branch SOF Division	
3 Attachments:	
1. AFSOC/A5K, Concurrence Memo, 1 Mar 2012	
2. AC-130H and “AC-130J” Comparison Matrix	
3. “AC-130J” Photographs	

Attachment 8

MDS POPULAR NAME REQUEST LETTER TEMPLATE

Figure A8.1. MDS Popular Name Request Letter Template.

(Use Official Letterhead)
DD MMM YYYY
MEMORANDUM FOR AF/A8PE
FROM: <i>Place your information here</i>
SUBJECT: Popular Name Request for (aircraft/missile/etcetera)
1. Request consideration of and approval to assign a Popular Name to aerospace vehicle (aircraft/missile/etcetera).
2. Reference PEO/PM and/or Lead and Using Command/Service Department, request/concurrence attached to this request. This attachment should be fairly detailed in describing the requirements for the Popular Name(s) being requested for approval. The attached letter should not only request the Popular Name(s) officially or give concurrence to, but should place them in an order of priority. Normally, it is not longer than one page. It should also be on Letterhead, list a point-of-contact, and be signed as well. Both of these letters define the position of the Air Force or other department concerning the Popular Name(s), in case there is any litigation. List any further pertinent information related to this subject that will help in the process of obtaining the Popular Name.
3. The following names are being submitted for consideration as Popular Name(s) in their order of priority.
a.
b.
c.
d.
e.
4. Any questions can be directed to point of contact name, phone number (DSN and/or commercial), and email address.
Signature NAME Title (area of responsibility)
2 Attachments:
1. PEO/PM and/or Lead and Using Command Request/Concurrence
2. Photographs of Vehicle

Attachment 9

SAMPLE (NOTIONAL) MDS POPULAR NAME REQUEST LETTER

Figure A9.1. Sample (Notional) MDS Popular Name Request Letter.

<p>(Official Letterhead)</p>
<p>1 Aug 19</p>
<p>MEMORANDUM FOR AF/A8PE</p>
<p>FROM: HQ AFSOC/A5K 100th Street Hurlburt Field, FL</p>
<p>SUBJECT: Popular Name Request for AC-130J Aircraft</p>
<p>1. Request consideration of and approval to assign a Popular Name to aerospace vehicle AC-130J of “Ghostrider.”</p>
<p>2. As the using command is requesting the popular name, no concurrence memo is required/attached. Local AFSOC PA office has concurred; found no issue with requested popular name.</p>
<p>3. The following names are being submitted for consideration as Popular Name(s) in their order of priority.</p>
<ul style="list-style-type: none">a. “Ghostrider”b. “Waverider”c. “Ghost Rain”
<p>4. Any questions can be directed to Ms. Jane Smith or Mr. John Smith, DSN 123-4567 or COMM 000-123-4567, jane.smith@afb.af.mil or john.smith@afb.af.mil.</p>
<p>//Signed,jds,1 Aug 19, 1200// J. D. SMITH Chief, Systems Branch SOF Division</p>
<p>1 Attachment: 1. “Ghostrider” photographs</p>

Attachment 10

MDS RETIREMENT REQUEST LETTER TEMPLATE

Figure A10.1. MDS Retirement Request Letter Template.

(Use Official Letterhead)
DD MMM YYYY
MEMORANDUM FOR AF/A8PE
FROM: <i>Place your information here</i>
SUBJECT: MDS Retirement Request for (aircraft/missile/etcetera)
1. Request consideration of and approval to retire an MDS (designator/popular name/designator and name) for aerospace vehicle (aircraft/missile/etcetera).
2. Reference PEO/PM and/or Lead and Using Command/Service Department, request/concurrence attached to this request. Normally, it is not longer than one page. It should also be on Letterhead, list a point-of-contact, and be signed as well. Both of these letters define the position of the Air Force or other department concerning the MDS retirement, in case there is any litigation. List any further pertinent information related to this subject that will help in the process of retiring the designator or popular name or both.
3. The following MDS designator and popular name (if applicable) are being submitted for consideration as retired:
Designator:
Popular Name (if applicable):
4. Any questions can be directed to point of contact name, phone number (DSN and/or commercial), and email address.
Signature NAME Title (area of responsibility)
1 Attachment:
1. PEO/PM and/or Lead and Using Command Request/Concurrence

Attachment 11

SAMPE (NOTIONAL) MDS RETIREMENT REQUEST LETTER TEMPLATE

Figure A11.1. Sample (Notional) MDS Retirement Request Letter Template.

(Official Letterhead)	
1 Aug 19	
MEMORANDUM FOR AF/A8PE	
FROM: ASC/WISL	
SUBJECT: MDS Retirement Request for AC-130J Aircraft	
1. Request consideration of and approval to retire an MDS designator and name for aerospace vehicle AC-130J Aircraft.	
2. AFSOC concurrence memorandum is attached.	
3. The following MDS designator and popular name (if applicable) are being submitted for consideration as retired:	
Designator:	AC-130J
Popular Name (if applicable):	“Ghostrider”
4. Any questions can be directed to Ms. Jane Smith or Mr. John Smith, DSN 123-4567 or COMM 000-123-4567, jane.smith@afb.af.mil or john.smith@afb.af.mil.	
//Signed,jds,1 Aug 19, 1200// J. D. SMITH Chief, Systems Branch SOF Division	
1 Attachment:	
1. AFSOC/A5K, Concurrence Memo, 3 Dec 2012	

Attachment 12

SAMPLE (NOTIONAL) MDS DESIGNATOR APPROVAL LETTER

Figure A12.1. Sample (Notional) MDS Designator Approval Letter.

<p>(Official Letterhead)</p>	<p>1 Aug 19</p>
<p>MEMORANDUM FOR</p>	
<p>ASC/WISL FROM: AF/A8 1070 Air Force Pentagon Washington, DC 20330-1070</p>	
<p>SUBJECT: Mission Design Series (MDS) Designator Request for AC-130J (ASC/WISL Letter, 15 Mar 12)</p>	
<p>1. MDS designation AC-130J is approved. AF/A8PE will submit this MDS update for DoD publication (DTIC DoDTechipedia or other DoD publication venue).</p>	
<p>2. AF/A8 point of contact agency is AF/A8PE, usaf.pentagon.af-a8.mbx.af-a8pe-workflow@mail.mil.</p>	
	<p>//Signed,jds,1 Aug 19, 1200// J. D. SMITH Assistant DCS, Strategic Plans and Programs</p>
<p>cc: SAF/PA SAF/AQ AF/A3 AF/A4</p>	

Attachment 13

SAMPLE (NOTIONAL) MDS POPULAR NAME APPROVAL LETTER

Figure A13.1. Sample (Notional) MDS Popular Name Approval Letter.

<p>(Official Letterhead)</p>	<p>1 Aug 19</p>
<p>MEMORANDUM FOR</p>	
<p>ASC/WISL FROM: SAF/OS 1670 Air Force Pentagon Washington, DC 20330- 1670</p>	
<p>SUBJECT: Mission Design Series (MDS) Popular Name Request for AC-130J (ASC/WISL Letter, 9 Jul 12)</p>	
<p>1. MDS popular name “Ghostrider” for the AC-130J is approved. AF/A8PE will submit this MDS update for DoD publication (DTIC DoDTechipedia or other DoD publication venue).</p>	
<p>2. AF/A8 point of contact agency is AF/A8PE, usaf.pentagon.af-a8.mbx.af-a8pe-workflow@mail.mil.</p>	
<p>//Signed,jds,1 Aug 19, 1200// J. D. SMITH Secretary of the Air Force</p>	
<p>cc: SAF/PA SAF/AQ AF/A3 AF/A4</p>	