

AIR FORCE
NOTE: This drawing was approved by the Department of the Air Force and Navy Department as the standard for this product. This drawing conforms to all applicable standards and specifications. It may be used for parts interchangeability, at the discretion of the user, after the latest date of approval.
NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government hereby disclaims any responsibility, nor any obligation whatsoever, and the fact that the Government may have furnished technical data or information in connection with a procurement operation, or conveying any rights or permissions to manufacturers, users, or other persons, shall not be construed as an implied or expressed warranty, or as an assumption of liability on the part of the Government.

SELF LOCKING NUTS AND PLATE NUTS SHALL BE OF AN APPROVED TYPE, SELECTED FROM THOSE LISTED IN AIR FORCE-NAVY BULLETINS NO. 159 AND NO. 325, AND SHALL BE SUBJECT TO THE FOLLOWING FUNCTIONAL LIMITATIONS:

1. THEY SHALL NOT BE USED AT JOINTS IN CONTROL SYSTEMS OR AIRCRAFT STRUCTURES WHEN MOVEMENT OF THE JOINT MAY RESULT IN MOTION OF THE NUT RELATIVE TO THE SURFACE AGAINST WHICH IT IS BEARING. THEY MAY BE USED WITH ANTI-FRICTION BEARINGS AND CONTROL PULLEYS PROVIDED THE INNER RACE OF THE BEARING IS CLAMPED TO THE SUPPORTING STRUCTURES BY THE NUT AND BOLT.
2. NUTS OF THE NO. 10 AND 1/4 SIZES SHALL BE USED ONLY WITH BOLTS, SCREWS OR STUDS THAT HAVE NOT BEEN DRILLED FOR COTTER PINS.
3. CORROSION RESISTING STEEL SELF LOCKING NUTS SHALL BE USED ONLY WITH CORROSION RESISTING STEEL BOLTS OR SCREWS.
4. ROUND OR CHAMFERED END BOLTS, STUDS OR SCREWS MUST EXTEND AT LEAST THE FULL ROUND OR CHAMFER THROUGH THE NUT. FLAT END BOLTS, STUDS OR SCREWS MUST EXTEND AT LEAST 1/32 INCH THROUGH THE NUT.
5. PLATE NUTS SHALL BE INSTALLED WITH RIVETS, SCREWS OR PROJECTION SPOT WELDING. IF PROJECTION SPOT WELDING IS USED, CONTROL SHALL BE MAINTAINED SO THAT REMOVAL, BY DRILLING OUT THE WELDS, PERMITS REPLACEMENT WITH STANDARD DRILLED PLATE NUTS.
6. NUTS WHICH ARE ATTACHED TO THE STRUCTURE SHALL BE ATTACHED IN A POSITIVE MANNER TO ELIMINATE THE POSSIBILITY OF THEIR ROTATION OR MISALIGNMENT WHEN TIGHTENING IS TO BE ACCOMPLISHED BY ROTATING THE BOLTS OR SCREWS. THE MANNER OF ATTACHMENT SHALL PERMIT REMOVAL WITHOUT INJURY TO THE STRUCTURE AND PERMIT REPLACEMENT OF THE NUTS.
7. ALL SELF LOCKING NUTS THAT HAVE HAD THE LOCKING ELEMENT REWORKED OR REPROCESSED BY OTHER THAN A NUT MANUFACTURER SHALL NOT BE USED BY CONTRACTORS OR FIELD MAINTENANCE PERSONNEL OF THE SERVICES.
8. SPECIAL NUTS, WHICH DEPEND ON FRICTION FOR THEIR ANCHORAGE AND TORSIONAL RIGIDITY, SUCH AS CLINCH NUTS, SINGLE RIVET PLATE NUTS, AND SIMILAR DEVICES, ARE NOT ACCEPTABLE FOR USE IN AIRCRAFT STRUCTURAL APPLICATIONS. THEY MAY BE USED ON AIRCRAFT EQUIPMENT AND COMPONENT PARTS SUCH AS INSTRUMENT MOUNTINGS AND ELECTRICAL EQUIPMENT.
9. SPLINE NUTS SHALL NOT BE USED IN AIRCRAFT STRUCTURAL APPLICATIONS BECAUSE OF LOW TORSIONAL STRENGTH AND MAINTENANCE DIFFICULTIES ENCOUNTERED IN REPAIRING OR REPLACING THEM.

③ INACTIVE FOR DESIGN AFTER 15 MARCH 1957.
USE STANDARD MS33588.

③ FOR DEFINITION AND APPLICATION OF DRAWING STATUS NOTES, SEE ANA BULLETIN NO. 337.

④ CANCELLED AFTER 19 SEPT 1977 SUPERSEDED BY
MS 33588

④ DENOTES CHANGES

AIR FORCE-NAVY AERONAUTICAL STANDARD

NUTS AND PLATE NUTS - SELF LOCKING,
FUNCTIONAL LIMITATIONS OF

AND10068

NOT A PART NUMBER

APPROVED 18 Dec 43 REVISED ① 2 May 45 ② 14 Apr 49 ③ 15 Mar 51 ④ 13 OCT 1977