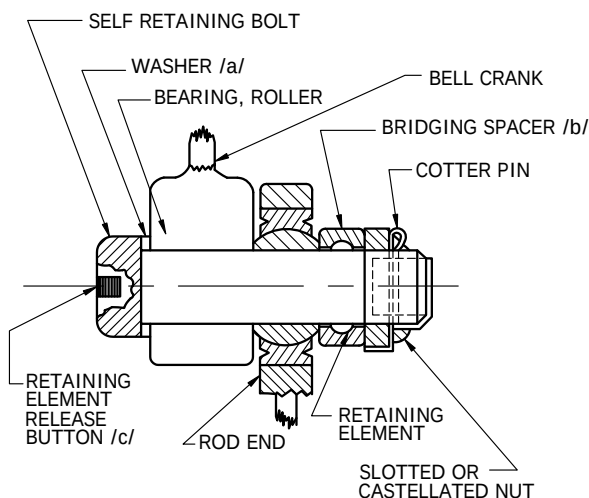
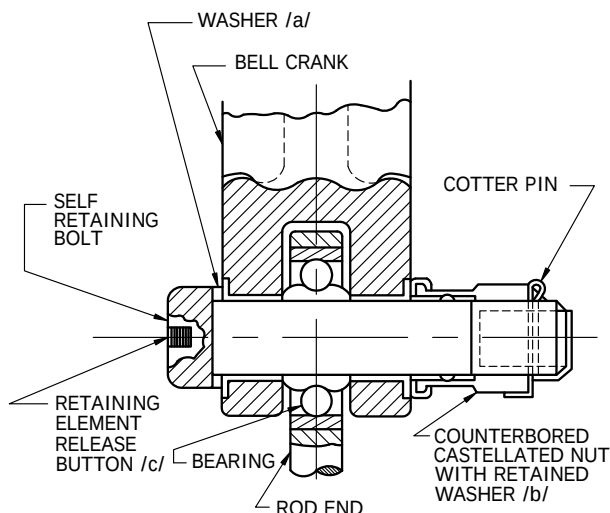


FED. SUPPLY CLASS

5306



/a/ Washer selected to take up excess bolt grip length and build up in length due to tolerances.

/b/ A bridging spacer may be used, or a slotted or castellated nut with a counterbore or recess for the retained element may be used.

/c/ Retaining element release button applies to positive locking bolts and not to impedance type bolts.

① COMPLETELY REVISED

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS33602.

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE BOLTS, SELF-RETAINING, AIRCRAFT, RELIABILITY AND MAINTAINABILITY, DESIGN AND USAGE REQUIREMENTS FOR	CLASSIFICATION DESIGN STANDARD MS33602



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Self-retaining bolts shall be of an approved type and shall be used in accordance with the following design and usage requirements:

- (1) Self-retaining bolts shall be used in control systems (such as flight controls, fuel controls, engine air induction controls, to assemble mechanical linkages with joints that are designed to transmit motion propeller controls, etc.) which results in relative rotation between the components, that will require frequent disassembly for adjustment or maintenance, where the bolt serves as an axis of rotation and where the separation of linkage would affect safety of flight.
- (2) The bolts shall be additionally locked in position by slotted or castellated nuts properly secured by cotter pins.
- (3) When self-retained bolts are used, that are not identified by an MS part number, the retaining element and its locking device shall be a design used on bolts that have qualification approval to NASM23964 for positive locking bolts and NASM83050 for impedance type bolts.
- (4) Self-retaining bolts that have had the retaining element or locking device reworked or reprocessed shall not be used.
- (5) Bridging spacers shall not be used with impedance type bolts. Bridging spacers shall be selected from MS21126 or MS21128.
- (6) Counterbored, castellated nuts, with retained washers, shall be selected from NASM21224.
- (7) Castellated nuts, shall be selected from MS17825, MS17826, NASM21224, NASM21244, NASM310 or NASM320.
- (8) This standard take precedence over documents referenced herein.
- (9) Unless otherwise specified herein, referenced documents shall be the issue in effect on date of manufacture. However, existing material inventory certified to a previous revision of the applicable material specification(s) is acceptable for use until depletion.
- (10) This is a design standard. Not to be used as a part number.

① COMPLETELY REVISED

REVISION
1
NASM33602
SHEET 2



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