

1.0 Generally any male threaded unit may be made self-locking.

1.1 See NASM15981 for limitations of use.

2.0 The information included in this design standard shall be applicable to all self-locking male threaded parts when specified. These details apply only to the locking element and do not define any other feature of the fastener.

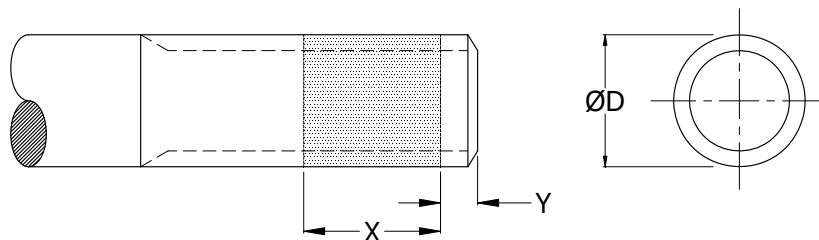


FIGURE 1 – FASTENER

2.1 “X” minimum (5 thread pitches) (Figure 1) = Region of minimum engagement of male threads with full female threads required to meet MIL-DTL-18240. The locking element within X region must develop the required torque when tested per MIL-DTL-18240. The length or diameter of locking element may be more or less than X providing all other requirements are met.

2.2 “Y” (Figure 1) = One complete thread plus unthreaded portion of end, i.e. chamfer and any extension beyond thread area. For ease in starting, the locking element shall not be effective within this area.

2.3 “D” (Figure 1) = Maximum major thread diameter. The locking region of the part must pass freely or with finger pressure through a ring gage of a diameter equal to the maximum major thread diameter of the part.

2.4 MIL-DTL-18240 does not cover all thread designations or lengths less than “X”. Minimum requirement for such configurations is a positive indication of torque.

2.5 The locking action results from the friction on the threads 180° from the locking element.

2.5.1 The locking element shall be of a type approved under QPL-18240 and installed by an authorized producer.

2.5.2 The locking element shall produce a torque equal to the value established by MIL-DTL-18240 when used with the male threads in an engagement with plain female threads throughout the region “X”, except as noted in 2.4.

2.5.3 The requirements of MIL-DTL-18240 are limited to 250 °F maximum temperature.

2.6 Three basic types of elements are available, as shown in Figure 2:

Type “N” indicates an hexagonal or round pellet.

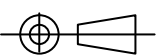
Type “L” indicates a longitudinal strip.

Type “P” indicates a patch type.

When possible specify type as OPTIONAL.

2.7 Identification Marking. When standard parts are reworked per Figure 1, the parts are to be identified with the addition of six or more raised or depressed dots in a circular pattern. If reworked to this specification to a special location as shown by section 3, the original part number is to be removed and replaced by an identification as specified by the Engineering drawing.

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PROCUREMENT
SPECIFICATION

TITLE

CLASSIFICATION
DESIGN STANDARD

NOTED

FASTENERS, MALE THREADED, SELF-LOCKING



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- 3.0 Detail drawing information: The detail male threaded part drawing may include one of the notes as suggested in paragraph 3.1 or may completely define the locking element by including the information as supplied in paragraph 3.2, 3.3, 3.4, or 3.5 as applicable.

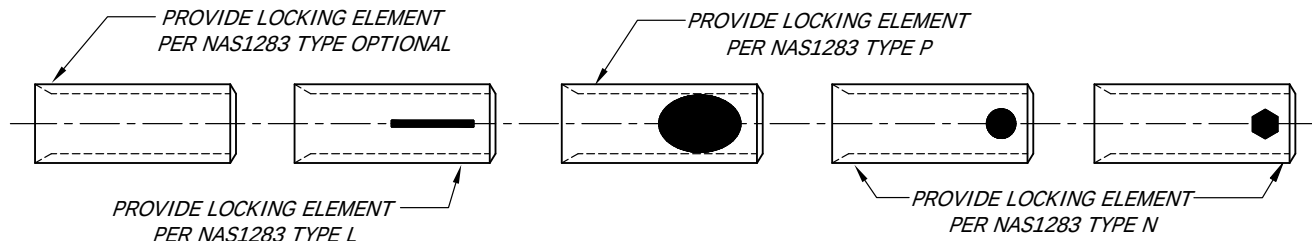


FIGURE 2 – ELEMENT TYPES

- 3.1 By use of a note similar to one of those suggested in Figure 2, the producer will determine the diameter or length and location of the element and supply a part as described in paragraph 2.
- 3.2 Insert type optional: Locate region “X” (5 pitches) and specify value for “Y” (Figure 1). Add note such as “Provide locking element per NAS1283 type optional.”
- 3.2.1 If locking element must be located diametrically in relation to other dimensions on the part, show as in Figure 3.

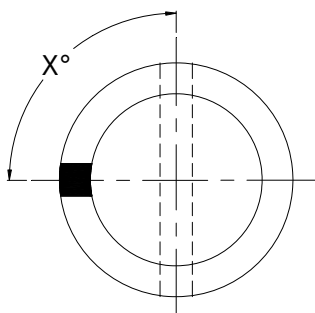


FIGURE 3 – INSERT LOCATION

- 3.3 Insert type “L”: When the longitudinal strip type insert is required locate as shown in Figure 4. Add note such as “Provide locking element per NAS1283 type L”.

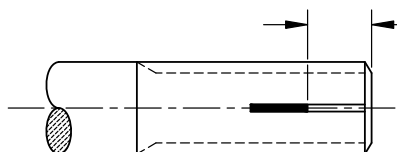


FIGURE 4 – INSERT LOCATION

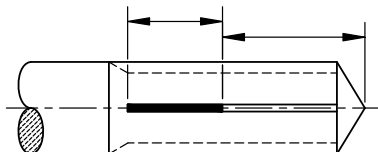


FIGURE 5 – INSERT LENGTH

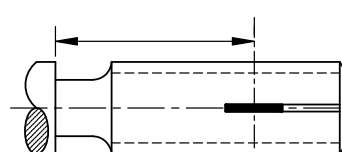


FIGURE 6 – INSERT
RELATIVE LOCATION

- 3.3.1 If locking element must be in a specified location in relation to other features of the part, show as in Figure 3 or Figure 6.
- 3.3.2 The insert length will be as specified in Table I unless otherwise specified as in Figure 5.

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