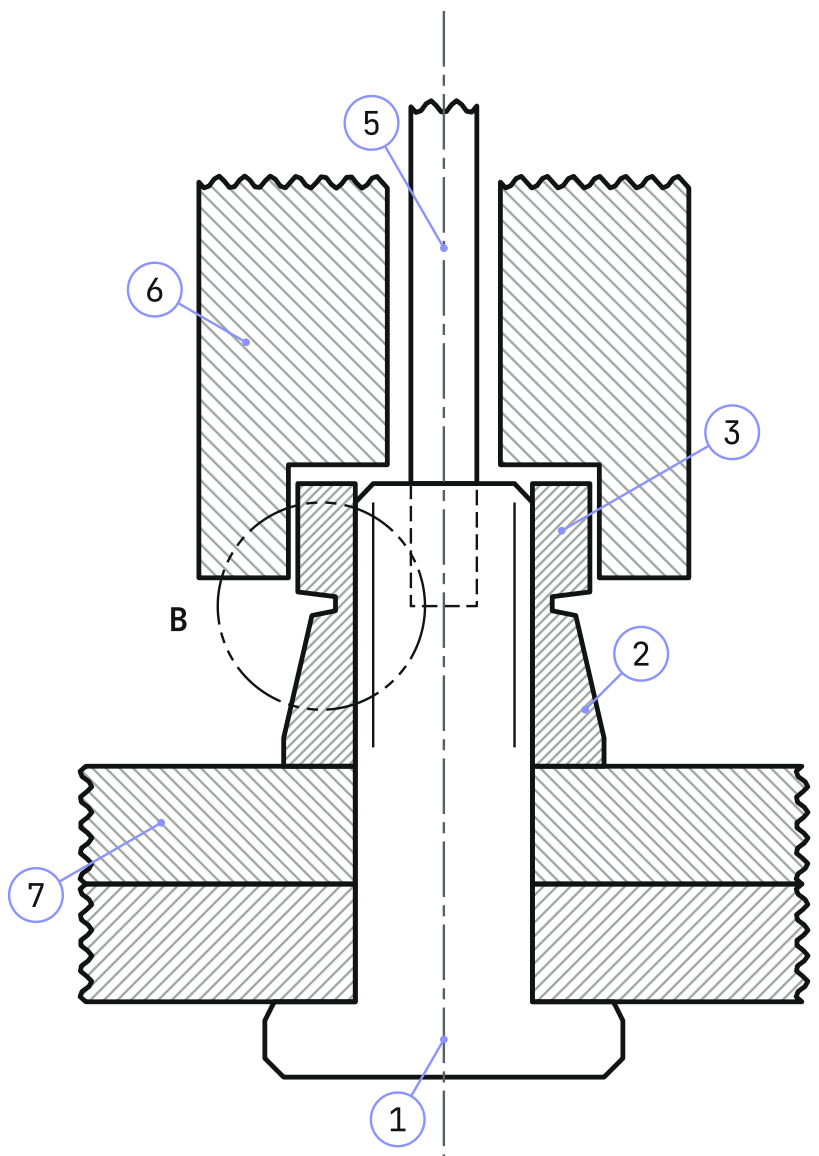
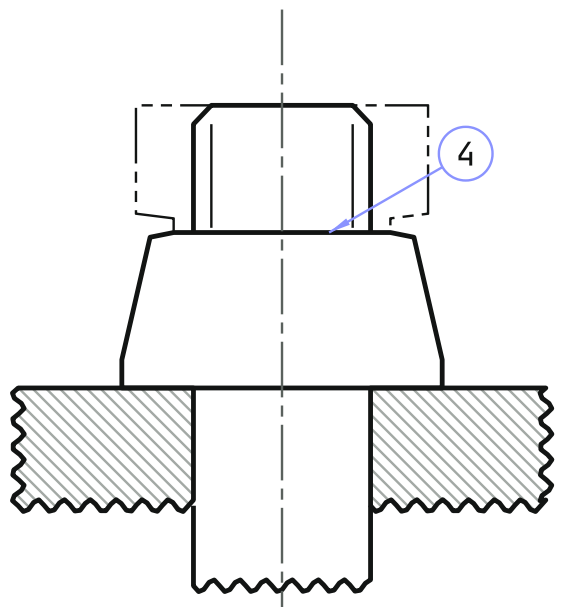
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Threaded Fastener Tools: Pin and Collar, Swaged Collar and Nutplate

A threaded pin with a collar goes in with two tools at once: a hex key holds the pin while a socket turns the collar until its drive nut shears off.



PIN AND COLLAR, SECTION
SCALE 3:1

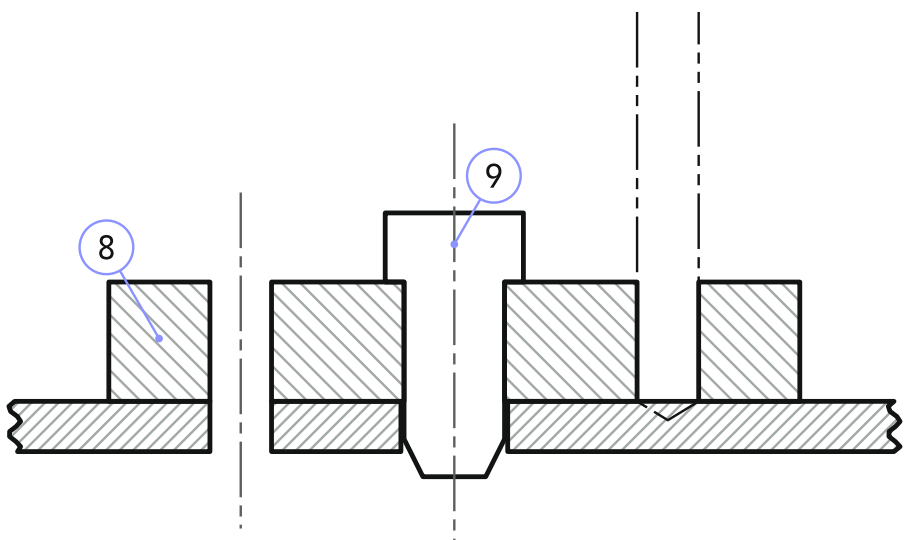


DETAIL B, AFTER BREAK
SCALE 3:1

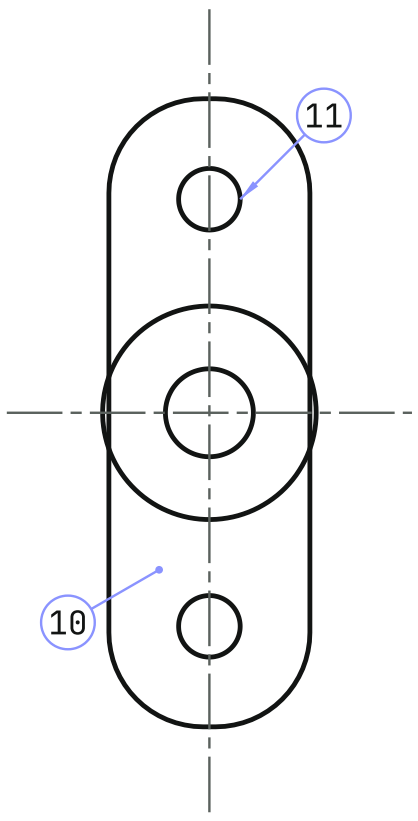
TOOL FOR THE JOB	
JOB	**TOOL**
PIN AND COLLAR	HEX KEY, SOCKET
TIGHT ACCESS	OFFSET HEAD
PRODUCTION	POWER DRIVER
SWAGED COLLAR	SWAGE TOOL
NUTPLATE HOLES	DRILL JIG, #40

PIN SIZE	
DASH	**SHANK, IN (MM)**
-5	5/32 (4.0)
-6	3/16 (4.8)
-8	1/4 (6.4)
-10	5/16 (7.9)
-12	3/8 (9.5)

NOTES
1. HOLD THE PIN WITH THE HEX KEY; TURN THE COLLAR ONLY.
2. THE DRIVE NUT SHEARS OFF AT THE BREAK GROOVE.
3. SOCKET TO FIT THE COLLAR DRIVE HEX.
4. NUTPLATE: SCREW HOLE, PILOT PIN, DRILL #40.



NUTPLATE DRILL JIG, SECTION
SCALE 2:1



NUTPLATE, TWO-LUG, PLAN
SCALE 2:1

ITEM	DESCRIPTION
11	HOLE, RIVET #40
10	NUTPLATE, TWO-LUG
9	PIN, PILOT
8	JIG, NUTPLATE DRILL
7	SHEET (REF)
6	SOCKET, COLLAR
5	KEY, HEX
4	GROOVE, BREAK
3	NUT, DRIVE
2	COLLAR, FRANGIBLE
1	PIN, THREADED

TOOLS, THREADED PIN, COLLAR, NUTPLATE	
SHEET 1 OF 1	
DWG TAP-TG-095	REV A
SCALE 1:1	

Types and sizes

Tool	Size	Use
Hex key	By pin dash size	Sits in the recess of the pin and holds it while the collar turns.
Hand wrench with hex socket	By collar drive hex	Repair work and single fasteners; the key goes through the socket.
Ratchet head, straight, offset or flush	By collar drive hex	Collars next to a flange, a frame or a stringer.
Power driver, pistol grip	By collar drive hex	Production rows of pins and collars.
Pull gun and nose assembly	By pin diameter	Pull-type lockbolts: swages the collar, the pintail breaks off.
Swaging set and bucking bar	By pin diameter	Stump-type lockbolts where a pull gun does not fit.
Nutplate drill jig	By screw size and lug pattern	Places the #40 rivet holes from the screw hole.
Dimple dies, #40	3/32 in (2.4 mm) rivet	Flush nutplate rivets in thin skin.

What to check when buying

Check	What to look for
Hex key	Fits the recess of each dash size you install; hard, square tip; spares in the kit.
Socket	Fits the collar drive hex and drives the nut only, clear of the collar base.
Head	Straight, offset or flush for the places you work; the key passes through it.
Power driver	Runs on the shop air pressure; takes the same sockets and keys as the hand tools.
Swage tool	Nose assembly or set for the pin diameter and the pull or stump type.
Drill jig	Screw size and lug pattern of your nutplates; hardened #40 guide holes; pilot pin to the screw hole.

Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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Accessories

Item	What it is for
Spare hex keys	One set per dash size.
Socket set by collar hex	Straight, offset and flush heads.
Grip gauge	Reads the grip of the hole for the pin length.
Temporary fasteners	Hold the parts and the jig while drilling.
Drop cloth or tray	Catches the sheared drive nuts and pintails.

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