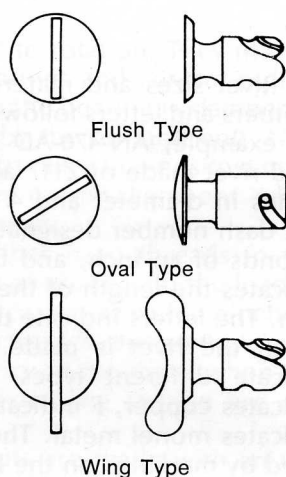


## TYPES OF DZUS STUDS



The three main parts of a Dzus fastener are the **stud**, the **spring**, and the **grommet**. The spring is made of steel music wire and is cadmium plated. The stud may be obtained in a number of different head styles as shown.

Dzus fasteners may be obtained with body diameters ranging from 3/16 in. to 3/4 in. in 1/16 in. variations, and with shank lengths ranging from .200 in. to 1 in. in .050 in. intervals.

When installing Dzus fasteners, use a ball-peen hammer, female die, and stud, and proceed as follows:

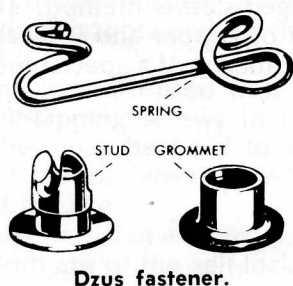
a. Drill a hole 1/16 in. larger than the diameter of the shank. Drill through both the top and bottom plates. Dimple both plates, using the stud and female die.

b. Using a ball-peen hammer with the female die, slightly dimple the flare on the bottom plate.

c. Cut a piece of 2S annealed aluminum tubing approximately 1/2 in. long, and, using the ball-end of the ball-peen hammer, flare one end.

d. Insert the stud in the grommet and place it into the female die; then drive the stud down snug, clinching it into position.

e. Fasten the spring in place on the lower plate by flush riveting. Use a thin washer to hold the shop head firmly on the spring.



## HOW TO IDENTIFY AND SELECT AIRCRAFT BOLTS



**CROSS or X** Non-Corrosion Resistant Steel Bolt. No letter or number to be applied to present number.

EXAMPLE AN6-10



**DOUBLE DASH** Aluminum Alloy Bolt. Add DD before dash number.

EXAMPLE AN6DD10



**SINGLE DASH** Corrosion Resistant Steel Bolt. Add C before dash number.

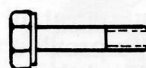
EXAMPLE AN6C10



**TRIANGLE** Close Tolerance Bolt. Add 17 before AN number up to and including AN9 and add 18 thereafter. Example: AN176-10. NOTE: If markings shown in b or c above are found with triangle add appropriate letters before dash number.

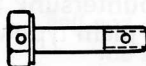
EXAMPLES: AN176DD10 or AN176C10

Select matching bolt and add drilling code to number.



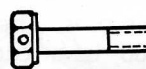
**UNDRILLED BOLT** Add A after dash number.

EXAMPLE AN6-10A



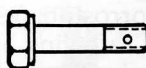
**DRILLED HEAD AND DRILLED SHANK** Add H before dash number.

EXAMPLE AN6H10



**DRILLED HEAD ONLY** Add H before dash number and A after dash number.

EXAMPLE AN6H10A



**DRILLED SHANK ONLY** No letter required.

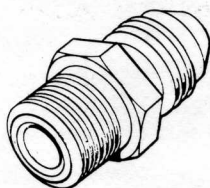
EXAMPLE AN6-10

For further information on Aircraft Hardware, see EAA "How To" Manual, **Sheet Metal**, Volume 2.

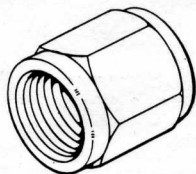
Available From:

EAA Air Education Museum Foundation  
Box 229  
Hales Corners, Wisconsin 53130

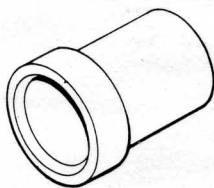
Price: \$2.50, plus 20c postage



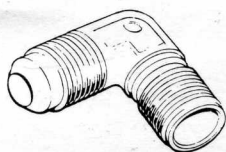
**AN 816 NIPPLE** — Flared tube and pipe thread



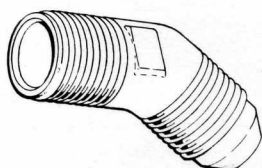
**AN 818 NUT** — Coupling



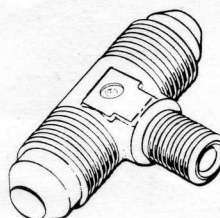
**AN 819 SLEEVE** — Coupling



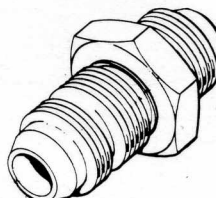
**AN 822 ELBOW** — Flared tube and pipe thread 90°



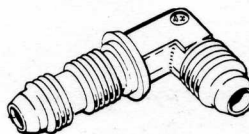
**AN 823 ELBOW** — Flared tube and pipe thread 45°



**AN 825 TEE** — Flared tube with pipe thread on side



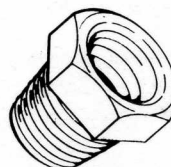
**AN 832 UNION** — Flared tube bulkhead



**AN 833 ELBOW** — Flared tube and bulkhead 90°



**AN 924 NUT** — Flared tube bulkhead



**AN 912 BUSHING** — Reducer Pipe

## ESNA

### REGULAR HEX, LIGHT NM, NE

1-72 thru 1 1/2-12  
To 250°F.

MS20365, MS21044, NAS1021, AN365  
MS17828, MS17829, MS17830



NM



NE

#### MATERIAL:

- "2" STEEL - AISI C-1212 OR EQUIV. (SIZES #1 THRU 5/8)
- "4" STEEL - AISI C-1117 OR EQUIV. (SIZES 1/4, 5/16, 3/4 AND LARGER)
- "5" STEEL - AISI C-1137 OR EQUIV. (SIZES 3/8 THRU 1 1/2)
- "6" ALUMINUM ALLOY - 2017-T4 OR EQUIV. (SIZES #2 THRU 1/2)
- "7" STAINLESS STEEL - AISI 303 OR EQUIV. (SIZES #1 THRU 3/4)
- "9" BRASS - COMMERCIAL HALF HARD OR EQUIV. (SIZES #1 THRU 5/8)

#### PART CODING:

F 52 NE-070

— THREAD SIZE.  
— NUT TYPE.  
— FINISH.  
— MATERIAL.

POST PLATE TREATMENT - CHROMATE FORTIFICATION ON CADMIUM PLATED PARTS ONLY.

#### FINISH:

- "1" ZINC PLATE, QQ-Z-325, TYPE I, CLASS 3.
- "2" CADMIUM PLATE, QQ-P-416, TYPE I, CLASS 3.
- "7" BRIGHT NICKEL PLATE, .0002 MIN THICKNESS.
- "8" ANODIZED, MIL-A-8625.
- "9" PLAIN.

LOCKING INSERT: RED NYLON. (250°F MAX PERFORMANCE)

## HEX NUTS

## ESNA

### ANCHOR, TWO LUG NA1

4-40 thru 5/8-18  
To 250°F.

NAS1023, AN366



#### FINISH:

- "2" CADMIUM PLATE, QQ-P-416, TYPE I, CLASS 3.
- "8" ANODIZED, MIL-A-8625.

LOCKING INSERT: RED NYLON (250°F MAX PERFORMANCE).

#### PART CODING:

F 22 NA1-048

— THREAD SIZE.  
— NUT TYPE.  
— FINISH.  
— MATERIAL.

POST PLATE TREATMENT - CHROMATE FORTIFICATION ON CADMIUM PLATED PARTS ONLY.

ADD SUFFIX LETTERS "BC" TO COMPLETE PART NUMBERS TO SPECIFY RIVET HOLES COUNTERSUNK 100° BY .200 OR .230 DIAMETER.

#### MATERIAL:

- "2" CARBON STEEL.
- "4" STEEL - AISI C-1030
- "5" STEEL - AISI C-1137.
- "6" ALUMINUM ALLOY - 2017-T4.

## ANCHOR NUTS

APPLICATION: TYPE NA1 IS DESIGNED FOR BLIND MOUNTED APPLICATIONS WHERE IT IS IMPRACTICAL TO USE HEXAGON NUTS OR WHERE IT IS DESIRABLE TO HAVE AN ATTACHED NUT FOR EASE OF MAINTENANCE.



