



# Standard Part

## Cotter Pins Split – Inch Extended Prong – Non-Preferred

STPJ110

87366664

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### 1. GENERAL

This standard is similar to ANSI B18.8.1 for cotter pins. For dimensions not shown in this specification, refer to ANSI B18.8.1.

### 2. RELATED DOCUMENTS

#### 2.1 REFERENCE STANDARDS

ANSI B18.8.1—Clevis Pins and Cotter Pins

MAT0310—Zinc Plating

STPA020—Fastener Finishes and Material Specifications

#### 2.2 REPLACED STANDARDS

Case J-010—Cotter Pins, Split (General Specifications)

Case J-011—Cotter Pins, Split – Preferred

Case J-012—Cotter Pins, Split – Non-preferred

NH FNHA-1-B-660.00—Cotter Pins, Extended Prong, ZnCr Coated

NH FNHA-1-B-670.00—Cotter Pins, Extended Prong, Plain

### 3. PREFERRED PARTS POLICY

All standard parts measured in inches are considered non-preferred. See STPJ540 for preferred parts (metric).

### 4. CROSS REFERENCE

For cross reference listing of company part numbers, go to [PARTsolutions](#).

### 5. MATERIAL AND FINISH

Material and finish shall conform to STPA020.

### 6. HEAD

The contour of the head shall be optional with the manufacturer provided the specified dimensions are maintained and there is no sharp indentation at the juncture of head and shank.

### 7. LENGTH

The length of the cotter pins shall be measured as indicated in Figure 1. Where pins having point types other than those illustrated herein are gauged, the length shall be measured from the plane of contact of gauge with head to the end of the shortest prong.

| AUTHOR         | APPROVED BY    | ECO      | PART NUMBER |
|----------------|----------------|----------|-------------|
| A KHAN 10APR25 | A KHAN 10APR25 | 35509988 | 87366664    |

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|-----------------------------------------------------------------------------------|--------------------------------------------------------------------|--|-------------|
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|                                                                                   |                                                                    |  | 87366664    |
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## 8. POINT

8.1 The preferred point type shall be the extended prong – square cut design as illustrated in Figure 1.

8.2 The ends of pins shall not be open and any gaps occurring between the prongs along the shank portion of pins beyond the point shall not exceed 0.015 inches. The misalignment of prongs over the entire length of the shank shall not exceed 0.015 inches.

## 9. DUCTILITY

The pins shall be ductile such that each prong of the pin can be bent back 180° once with no visible indication of fracture. Plating must not interfere with separation of prongs by normal spreading means. Plating must not lift or peel.



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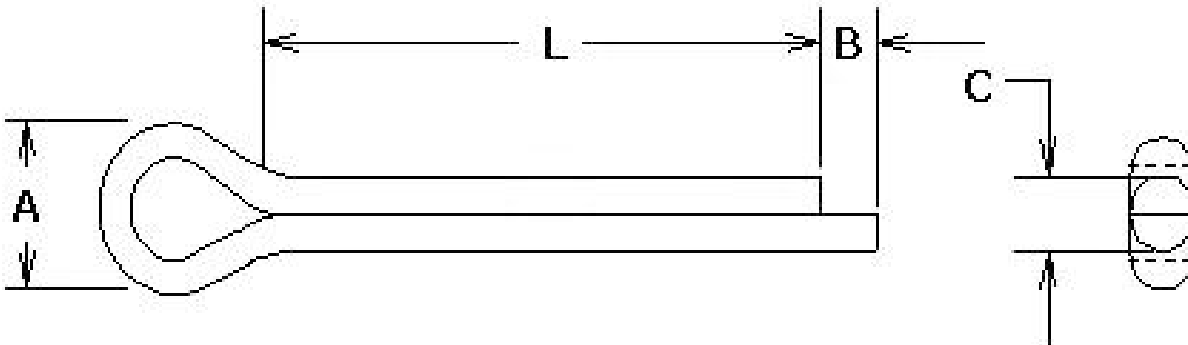


FIGURE 1: Split Cotter Pin Diagram

TABLE 1: Basic Dimensions in Inches

| Nominal Size or Basic Pin Diameter |       | Head Diameter | Extended Prong Length | Total Shank Diameter |         | Recommended Hole Size |
|------------------------------------|-------|---------------|-----------------------|----------------------|---------|-----------------------|
|                                    |       | A             | B                     | C*                   |         | Nominal               |
|                                    |       | Minimum       | Minimum               | Maximum              | Minimum |                       |
| 1/32                               | 0.031 | 0.06          | 0.01                  | 0.032                | 0.028   | 0.047                 |
| 3/64                               | 0.047 | 0.09          | 0.02                  | 0.048                | 0.044   | 0.062                 |
| 1/16                               | 0.062 | 0.12          | 0.03                  | 0.060                | 0.056   | 0.078                 |
| 5/64                               | 0.078 | 0.16          | 0.04                  | 0.076                | 0.072   | 0.094                 |
| 3/32                               | 0.094 | 0.19          | 0.04                  | 0.090                | 0.086   | 0.109                 |
| 7/64                               | 0.109 | 0.22          | 0.05                  | 0.104                | 0.100   | 0.125                 |
| 1/8                                | 0.125 | 0.25          | 0.06                  | 0.120                | 0.116   | 0.141                 |
| 9/64                               | 0.141 | 0.28          | 0.06                  | 0.134                | 0.130   | 0.156                 |
| 5/32                               | 0.156 | 0.31          | 0.07                  | 0.150                | 0.146   | 0.172                 |
| 3/16                               | 0.188 | 0.38          | 0.09                  | 0.176                | 0.172   | 0.203                 |
| 7/32                               | 0.219 | 0.44          | 0.10                  | 0.207                | 0.202   | 0.234                 |
| 1/4                                | 0.250 | 0.50          | 0.11                  | 0.225                | 0.220   | 0.266                 |
| 5/16                               | 0.312 | 0.62          | 0.14                  | 0.280                | 0.275   | 0.312                 |
| 3/8                                | 0.375 | 0.75          | 0.16                  | 0.335                | 0.329   | 0.375                 |
| 7/16                               | 0.438 | 0.88          | 0.20                  | 0.406                | 0.400   | 0.438                 |
| 1/2                                | 0.500 | 1.00          | 0.23                  | 0.473                | 0.467   | 0.500                 |
| 5/8                                | 0.625 | 1.25          | 0.30                  | 0.598                | 0.590   | 0.625                 |
| 3/4                                | 0.750 | 1.50          | 0.36                  | 0.723                | 0.715   | 0.750                 |

\*Dimension C listed above applies to product prior to plating.



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TABLE 2: Inch Split Cotter Pins, STL, ZND

| Length | Nominal Size or Basic Pin Diameter    |          |          |          |          |          |          |          |          |                                       |          |
|--------|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------------------|----------|
| L      | 1/16                                  | 3/32     | 1/8      | 5/32     | 3/16     | 7/32*    | 1/4      | 5/16     | 3/8      | 1/2*                                  | 5/8*     |
| 0.375  | 71592                                 |          |          |          |          |          |          |          |          | Do not use these sizes in new designs |          |
| 0.5    | 280236                                | 88788    | 87394    |          |          |          |          |          |          |                                       |          |
| 0.625* | 280224                                | 86523954 |          |          |          |          |          |          |          |                                       |          |
| 0.75   | 86523849                              | 280250   | 80756    |          | 87019    |          | 86523961 |          |          |                                       |          |
| 1      | 86624069                              | 280251   | 80755    | 86523956 | 87397    | 87533953 | 87401    |          |          |                                       |          |
| 1.25   |                                       |          | 87395    | 86523851 | 87398    |          | 87402    |          |          |                                       |          |
| 1.5    | 86523779                              | 86523850 | 80708    | 88350    | 80754    |          | 80753    | 84156990 |          |                                       |          |
| 1.75   |                                       |          | 87673    | 281075   | 87399    |          | 87041    |          |          |                                       |          |
| 2      |                                       | 70925718 | 86523955 | 86523957 | 87400    | 70929952 | 88182    | 3566     | 86523778 | 86624071                              |          |
| 2.125* |                                       |          |          |          | 83947107 |          |          |          |          |                                       |          |
| 2.25   |                                       |          |          |          | 86523852 |          | 280429   | 86523963 |          |                                       |          |
| 2.5    |                                       |          | 280987   | 86523958 | 86523959 |          | 80752    | 86624083 | 87575    |                                       |          |
| 2.75   |                                       |          |          |          |          |          |          |          |          |                                       |          |
| 3      |                                       |          | 70925720 |          | 70925724 |          | 86523962 | 281072   | 86523960 |                                       |          |
| 3.312* |                                       |          |          | 3741     |          |          |          |          |          |                                       |          |
| 3.5    |                                       |          |          |          | 9790710  |          | 70929955 |          | 70929958 |                                       |          |
| 4      |                                       |          |          |          |          |          |          | 47658592 |          | 70929967                              |          |
| 5*     | Do not use these sizes in new designs |          |          |          |          |          |          |          | 70929961 |                                       | 70929969 |
| 6*     |                                       |          |          |          |          |          |          |          | 70929962 |                                       |          |

\* Do not use these sizes in new designs

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TABLE 3: Inch Split Cotter Pins, STL, PLN

| Length | Nominal Size or Basic Pin Diameter    |        |       |          |       |          |          |          |                                       |          |
|--------|---------------------------------------|--------|-------|----------|-------|----------|----------|----------|---------------------------------------|----------|
| L      | 1/32*                                 | 3/64*  | 1/16  | 3/32     | 1/8   | 5/32     | 3/16     | 1/4      | 5/16                                  | 3/8      |
| 0.312* |                                       | 426706 |       |          |       |          |          |          | Do not use these sizes in new designs |          |
| 0.375  |                                       |        | 84326 |          |       |          |          |          |                                       |          |
| 0.5    |                                       |        | 81858 | 88383    | 80746 |          |          |          |                                       |          |
| 0.625* |                                       |        |       |          | 80661 |          |          |          |                                       |          |
| 0.75   | 86643106                              |        | 81859 | 80743    | 80742 |          |          |          |                                       |          |
| 0.875* |                                       |        |       |          | 80757 |          |          |          |                                       |          |
| 1      |                                       |        | 81860 | 70900802 | 80741 | 80744    | 80080739 |          |                                       |          |
| 1.125* |                                       |        |       |          | 80750 |          |          |          |                                       |          |
| 1.25   |                                       |        |       |          |       | 84887    | 80738    |          | 86523988                              |          |
| 1.5    |                                       |        |       |          | 80740 |          | 80737    |          |                                       |          |
| 1.75   |                                       |        |       |          | 84298 | 87016623 |          |          |                                       |          |
| 2      |                                       |        |       |          | 80618 |          | 80812    | 70901344 | 86523989                              |          |
| 2.25   |                                       |        |       |          |       |          |          |          | 70911279                              |          |
| 2.5    |                                       |        |       |          |       |          | 70910024 | 70901345 |                                       | 70901348 |
| 2.75   |                                       |        |       |          | 87734 |          | 84414    |          |                                       |          |
| 3      |                                       |        |       |          |       |          | 86523987 | 80732    |                                       | 80706    |
| 3.25*  |                                       |        |       |          |       |          | 84145    |          |                                       |          |
| 3.5    |                                       |        |       |          |       |          |          |          |                                       |          |
| 4      | Do not use these sizes in new designs |        |       |          |       |          |          |          |                                       | 80730    |
| 5*     |                                       |        |       |          |       |          |          | 70919271 |                                       |          |

\* Do not use these sizes in new designs

TABLE 4: Inch Split Cotter Pins, SST (Stainless Steel)

| Nominal Diameter | Length (L) | Material | Finish | Part Number |
|------------------|------------|----------|--------|-------------|
| 1/16             | 0.50       | SST      | PLN    | 81454228    |
| 1/8              | 0.75       | SST      | PLN    | 187352      |
| 1/8              | 1          | SST      | PLN    | 90399803    |
| 1/8              | 1-1/4      | SST      | PLN    | 90404692    |
| 1/8              | 2          | SST      | PLN    | 92703960    |
| 3/16             | 1-3/4      | SST      | PLN    | 90404693    |
| 3/16             | 2          | SST      | PLN    | 90404694    |



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**TABLE 5: Inch Split Cotter Pins, STL (Steel)**

| <b>Nominal Diameter</b> | <b>Length (L)</b> | <b>Material</b> | <b>Finish</b> | <b>Part Number</b> |
|-------------------------|-------------------|-----------------|---------------|--------------------|
| 1/8                     | 3/4               | STL             | DAC           | 90499688           |
| 1/8                     | 1                 | STL             | DAC           | 90374439           |