



Standard Part

Slotted Spring Pins - Inch - Non-Preferred

STPJ230

87366808

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1. GENERAL

This standard conforms essentially with ANSI B18.8.2 for spring pins. All dimensions in this standard are in inches. For dimensions not shown in this specification, refer to ANSI B18.8.2.

2. RELATED DOCUMENTS

2.1 REFERENCE STANDARDS

ANSI B18.8.2—Taper Pins, Dowel Pins, Straight Pins, Grooved Pins, and Spring Pins (Inch Series)
CNH MAT0310—Zinc Plating
CNH STPA020—Fastener Finishes and Material Specifications
Case MS-90—Manganese Phosphate Coating

2.2 REPLACED STANDARDS

Case J-050—Spring Pins, Coiled and Slotted (General Specifications)
Case J-053—Spring Pins, Slotted – Non-Preferred
NH FNHA-1-B-710.00—Spring Pins, Slotted Type, Plain

3. PREFERRED PARTS POLICY

All standard parts measured in inches are considered non-preferred. Coiled spring pins are favored over slotted spring pins. See STPJ220 for coiled spring pins and STPJ590 for preferred parts (metric).

4. CROSS REFERENCE

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

5. MATERIAL AND HARDNESS

Table 1 designates materials and the proper Rockwell scale to be used for slotted spring pins.

AUTHOR	APPROVED BY	ECO	PART NUMBER
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6. FINISH

6.1 Pins shall be furnished plain (PLN), plated, or coated in accordance with CNH or Case Material Specifications and class listed below:

- Zinc Dichromate (ZNM) - CNH MAT0310, Class 5
- Phosphate (PHC) - Case MS-90, Class 1

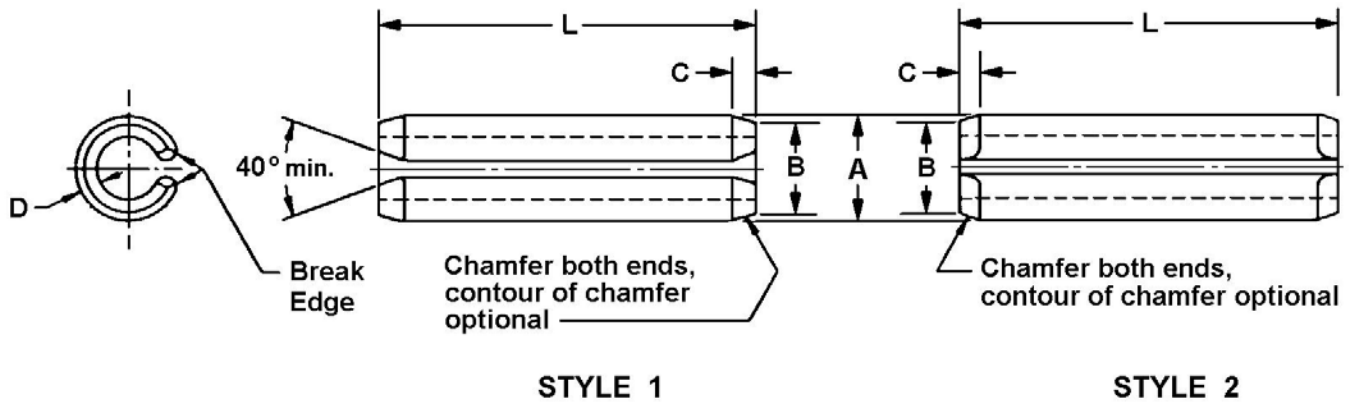
6.2 Where electroplating of carbon steel parts is such that it might induce hydrogen embrittlement, spring pins shall be baked or treated in such a manner as to be free of such embrittlement.

6.3 Cadmium finish is not to be used due to environmental concerns.

TABLE 1: Materials and Hardness

Nominal Pin Size	.062 - .094	.125 - .250	.312 - .750*
Hardness Test	Rockwell 15N	Rockwell A	Rockwell C
Material	Hardness Reading		
AISI 1070-1095 Steel	83.5 – 86.9	73.6 – 77.4	46 – 53
AISI 420 Corrosion Resistant Steel (SST)	82 – 86.6	72 – 76.8	43 - 52

* All pins of .625 and larger diameter are produced from AISI 6150H alloy steel with a hardness of 43 to 51 Rockwell C


FIGURE 1: Slotted Spring Pin Diagram
TABLE 2: Basic Dimensions in Inches

Basic Pin Diameter		Pin Diameter		Chamfer Length		Chamfer Diameter	Stock Thickness	Recommended Hole Size		Minimum Double Shear Load, lbs
		A		C		B	D	Min	Max	
		Max	Min	Max	Min	Max	Nom			
1/16	0.062	.069	.066	.028	.007	.059	.012	.062	.065	430
5/64	0.078	.086	.083	.032	.008	.075	.018	.078	.081	800
3/32	0.094	.103	.099	.038	.008	.091	.022	.094	.097	1,150
1/8	0.125	.135	.131	.044	.008	.122	.028	.125	.129	1,875
9/64	0.140	.149	.145	.044	.008	.137	.028	.140	.144	2,175
5/32	0.156	.167	.162	.048	.010	.151	.032	.156	.160	2,750
3/16	0.188	.199	.194	.055	.011	.182	.040	.187	.192	4,150
7/32	0.219	.232	.226	.065	.011	.214	.048	.219	.224	5,850
1/4	0.250	.264	.258	.065	.012	.245	.048	.250	.256	7,050
5/16	0.312	.330	.321	.080	.014	.306	.062	.312	.318	10,800
3/8	0.375	.395	.385	.095	.016	.368	.077	.375	.382	16,300
7/16	0.438	.459	.448	.095	.017	.430	.077	.437	.445	19,800
1/2	0.500	.524	.513	.110	.025	.485	.094	.500	.510	27,100



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TABLE 3: Inch Slotted Spring Pins, PLN

Length	Nominal Size or Basic Pin Diameter												
	L	1/16	5/64*	3/32	1/8	5/32	3/16	7/32*	1/4	5/16	3/8	7/16*	1/2
0.187													Do not use these sizes in new designs
0.22*				70927398									
0.25			86544799	17058									
0.312		70922745		88868									
0.375			70915996	81811909		86544804							
0.437				81818130									
0.5			86544800	88467	70926358	20344		86977782	70923285	70920379			
0.562													
0.625			70916018	87128		88180	70921768	70919347		70921459			
0.687									9672938				
0.75			70916014	87663	86977758	70916169	88414	81815228	86544808	70919777			
0.812				70935070									
0.875			70922385	70916202		87336		86544806	70931065				
0.937				9617888		70921460							
1				87455		118827	9673062	87538	88005	70918113			70930272
1.125			86544801	83416574	86512511	88171	70921330	70915634	9416325				
1.25				87913	86544803	84923	88648	87334	87721	70918390			86617
1.375				87752079	70922214			87524	70921839	70915917			
1.5					70923740	87757	70921452	87406	87947	87590			70922524
1.625				70918413			70927229	87516	70921559	70918623			
1.75				88422	70921451	87578	88529	87343	87681	87949			9790580
1.875								86544807					
2				86544802		88617	86544805	87718	87580	87577			86527132
2.25								88078	87773	280239			
2.5						70922416	280179	87566	87948	87597			70918245
2.75								70918112			70918782		
3								87955	70917904	86544809			
3.25													70922412
3.5										70917936			
3.75													
4		Do not use these sizes in new designs											86505842
4.5*													86544810

* Do not use these sizes in new designs

TABLE 4: Inch Slotted Spring Pins, ZND

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Length L	Nominal Size or Basic Pin Diameter									
	1/16	3/32	1/8	5/32	3/16	1/4	5/16	3/8	7/16*	1/2
0.187									Do not use these sizes in new designs	
0.25										
0.312										
0.375										
0.437										
0.5						87040774				
0.562										
0.625										
0.687										
0.75			84326210							
0.812										
0.875						47465247				
0.937										
1			84158892	86624058	82895491	84158591				
1.125						47522930				
1.25					87020816					
1.375						84523392				
1.5					87020817	84158592		87040620		
1.625					83914159					
1.75						84543943	84221259	86616372		
1.875										
2			86015836			87020818	87040910	86624061		
2.125*										70921453
2.25						84158888	87019504	84158890		
2.375*										70921454
2.5						84158889	86625112	87635861	47478854	84204169
2.75										70921200
3					7189	87690468	8559	3661		
3.25								84158891		
3.5										84323489
3.75	Do not use these sizes in new designs									
4	Do not use these sizes in new designs									

* Do not use these sizes in new designs



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TABLE 5: Inch Slotted Spring Pins, PHC

Nominal Diameter	Length (L)	Finish	Part Number
1/8	0.437	PHC	82895501
1/8	1.0	PHC	9627913
1/8	1.5	PHC	83952611
5/32	0.875	PHC	83926600
5/32	1.0	PHC	83926136
5/32	1.75	PHC	9627919
3/16	0.812	PHC	81821711
3/16	0.938	PHC	83928925
3/16	1.0	PHC	83928454
7/32	0.938	PHC	83908988
7/32	1.125	PHC	83913778
5/16	1.375	PHC	81820663
3/8	1.125	PHC	81827208

TABLE 6: Inch Slotted Spring Pins, MISCELLANEOUS

Nominal Diameter	Length (L)	MAT.	Finish	Part Number
5/32	1.5	SST	PLN	84204175
7/32	2.0	SST	PLN	90327767
3/8	2.5	SST	PLN	84204174
7/16	2.75	CST	ZND	84294526