

FED. SUPPLY CLASS

5315

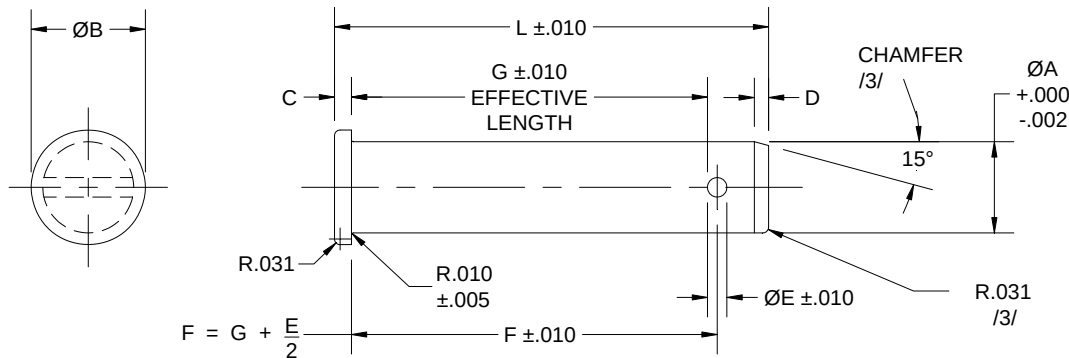


TABLE I

DIMENSION	NOMINAL SIZE												
	.125	.156	.188	.250	.312	.375	.438	.500	.562	.625	.750	.875	1.000
ØA	.124	.155	.186	.248	.311	.373	.436	.497	.560	.622	.747	.871	.996
ØB	.250	.281	.312	.375	.437	.500	.562	.625	.687	.750	.875	1.062	1.187
C	.046	.046	.046	.062	.062	.062	.093	.093	.093	.093	.093	.125	.125
D	.046	.046	.046	.062	.078	.078	.078	.078	.078	.078	.078	.093	.093
ØE	.070	.070	.076	.076	.106	.106	.106	.106	.141	.141	.141	.171	.171
MATERIAL	MIN DOUBLE SHEAR STRENGTH (LBS)												
C	1,740	2,740	3,960	7,090	11,200	16,160	22,130	28,800	36,600	45,200	65,280	88,840	116,260
S	2,500	3,940	5,710	10,220	16,140	23,270	31,870	41,470	52,710	65,090	94,010	127,930	167,410
R	2,730	4,360	6,360	11,500	18,270	26,450	36,310	47,340	60,260	74,510	107,810	146,910	192,440
P	2,920	4,600	6,650	11,880	18,750	27,030	36,980	48,110	61,140	75,480	108,980	148,280	194,000
A	2,200	3,470	5,020	8,990	14,190	20,470	28,030	36,480	46,360	57,260	82,690	112,530	147,260
T	2,220	3,490	5,050	9,130	14,250	20,540	28,110	36,560	46,460	57,360	82,820	112,690	147,440

REQUIREMENTS.

1. MATERIAL:

STEEL ALLOY - UNS G40370 (AISI 4037) PER AMS6300 OR UNS G41300 (AISI 4130) PER AMS-S-6758 OR UNS G86300 (AISI 8630) PER MIL-S-6050 OR UNS G87400 (AISI 8740) PER MIL-S-6049 AMS6322, AMS6325, OR AMS6327. CORROSION RESISTANT STEEL (CRES) (PH13-8Mo) - UNS S13800 (AISI 13800) PER AMS5629
TITANIUM ALLOY - (Ti-6Al-4V) - UNS R56400 PER AMS6930 OR AMS6931.

2. FINISH:

STEEL ALLOY - CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE II, CLASS 2.
CRES - CHROME PLATED IN ACCORDANCE WITH AMS2460, CLASS 2 (.002 - .004) OR CLEANED. DESCALED AND PASSIVATED IN ACCORDANCE WITH AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 1.
TITANIUM ALLOY - ALUMINUM COATED IN ACCORDANCE WITH MIL-DTL-83488, CLASS 3, AND LUBRICATED WITH SOLID FILM LUBRICANT IN ACCORDANCE WITH AS5272, TYPE I, OR NO FINISH.

THIS INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS20392 REVISION F. PART NUMBERS REMAIN MS20392

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NASM5673	TITLE PIN, STRAIGHT, HEADED DRILLED SHANK	CLASSIFICATION PART STANDARD
		NASM20392 SHEET 1 OF 7

3. MATERIAL AND FINISH CODES:

"C" = STEEL ALLOY, 4037, 4130, 8630, OR 8740, CADMIUM PLATED.

"S" = STEEL ALLOY, 8740, CADMIUM PLATED

"R" = CORROSION RESISTANT STEEL, PH13-8Mo, CHROME PLATED

"P" = CORROSION RESISTANT STEEL, PH13-8Mo

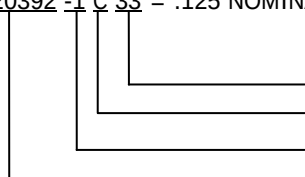
CLEANED, DESCALED AND PASSIVATED.

"A" = TITANIUM ALLOY, Ti-6Al-4V, ALUMINUM COATED AND LUBRICATED WITH SOLID FILM LUBRICANT.

"T" = TITANIUM ALLOY, Ti-6Al-4V, NO FINISH.

4. EXAMPLE OF PART NUMBER:

MS20392 -1 C 33 = .125 NOMINAL DIA X 1.031 EFFECTIVE LENGTH, STEEL ALLOY, 4037, 4130, 8630, OR 8740 CADMIUM PLATED.



"G" EFFECTIVE LENGTH IN 1/32
MATERIAL AND FINISH CODE (SEE REQUIREMENT 3)
DASH NUMBER (SEE TABLE II)
BASIC MS NUMBER

NOTES

1. DIMENSIONS ARE IN INCHES. DIMENSION SHOWN ARE AFTER FINISH.
2. UNLESS OTHERWISE SPECIFIED, TOLERANCES ON DECIMALS SHALL BE $\pm .016$ AND ON ANGLES SHALL BE $\pm 1/2^\circ$.
3. THE SHANK END OF PINS MAY HAVE EITHER A CHAMFER OR RADIUS AT THE OPTION OF THE VENDOR.
4. PINS SHALL BE FREE OF BURRS AND SHARP EDGES.
5. INTERCHANGEABILITY RELATIONSHIP: MS20392 STEEL ALLOY PINS CAN UNIVERSALLY REPLACE THE CANCELED AN392, AN393, AN394, AN395, AN396, AN400, AN402, AN404, AND AN406 STEEL PINS OF THE SAME SPECIFIED PLATING, NOMINAL PIN DIAMETER, EFFECTIVE LENGTH AND TOTAL LENGTH: BUT THE CANCELED AN392, AN393, AN394, AN395, AN396, AN400, AN402, AN404, AND AN406 CANNOT REPLACE THE SUPERSEDING MS20392.
6. PINS FABRICATED FROM 4130 STEEL ALLOY (UNS G41300) AND CADMIUM PLATED PER AMS-QQ-P-416, TYPE II, CLASS 2 MAY BE USED UNTIL EXISTING STOCK ARE DEPLETED.
7. UNS G87400 (AISI 8740) STEEL ALLOY CAN BE USED IN THE MANUFACTURE OF "C" OR "S" CLEVIS PINS AT THE DISCRETION OF THE MANUFACTURER/SUPPLIER. HOWEVER THE "S" CLEVIS PINS SHALL BE HEAT TREATED TO ENABLE THE PINS TO HAVE THE REQUIRED DOUBLE SHEAR STRENGTH.
8. MS20392 SUPERSEDES AN392, AN393, AN394, AN395, AN396, AN400, AN402, AN404, AND AN406.
9. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE. TABLE 1 AND PARAGRAPH 3.3 OF NASM5673 ARE NOT APPLICABLE TO THIS DOCUMENT.
10. UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.
11. UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PRODUCED AND USED UNTIL STOCK IS DEPLETED.

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1

NASM20392

SHEET 2



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TABLE II

G EFFECTIVE LENGTH	DASH NUMBERS											
	PIN DIAMETER (NOMINAL)											
	.125				.156				.188			
	STEEL ALLOY /1/	CRES /3/	TITANIUM ALLOY /2/	L	STEEL ALLOY /1/	CRES /3/	TITANIUM ALLOY /2/	L	STEEL ALLOY /1/	CRES /3/	TITANIUM ALLOY /2/	L
.219	1C7	1R7	1T7	.391	13C7	13R7	13T7	.391	2C7	2R7	2T7	.391
.281	1C9	1R9	1T9	.453	13C9	13R9	13T9	.453	2C9	2R9	2T9	.453
.344	1C11	1R11	1T11	.516	13C11	13R11	13T11	.516	2C11	2R11	2T11	.516
.406	1C13	1R13	1T13	.578	13C13	13R13	13T13	.578	2C13	2R13	2T13	.578
.469	1C15	1R15	1T15	.641	13C15	13R15	13T15	.641	2C15	2R15	2T15	.641
.531	1C17	1R17	1T17	.703	13C17	13R17	13T17	.703	2C17	2R17	2T17	.703
.594	1C19	1R19	1T19	.766	13C19	13R19	13T19	.766	2C19	2R19	2T19	.766
.656	1C21	1R21	1T21	.828	13C21	13R21	13T21	.828	2C21	2R21	2T21	.828
.719	1C23	1R23	1T23	.891	13C23	13R23	13T23	.891	2C23	2R23	2T23	.891
.781	1C25	1R25	1T25	.953	13C25	13R25	13T25	.953	2C25	2R25	2T25	.953
.844	1C27	1R27	1T27	1.016	13C27	13R27	13T27	1.016	2C27	2R27	2T27	1.016
.906	1C29	1R29	1T29	1.078	13C29	13R29	13T29	1.078	2C29	2R29	2T29	1.078
.969	1C31	1R31	1T31	1.141	13C31	13R31	13T31	1.141	2C31	2R31	2T31	1.141
1.031	1C33	1R33	1T33	1.203	13C33	13R33	13T33	1.203	2C33	2R33	2T33	1.203
1.094	1C35	1R35	1T35	1.266	13C35	13R35	13T35	1.266	2C35	2R35	2T35	1.266
1.156	1C37	1R37	1T37	1.328	13C37	13R37	13T37	1.328	2C37	2R37	2T37	1.328
1.219	1C39	1R39	1T39	1.391	13C39	13R39	13T39	1.391	2C39	2R39	2T39	1.391
1.281	1C41	1R41	1T41	1.453	13C41	13R41	13T41	1.453	2C41	2R41	2T41	1.453
1.344	1C43	1R43	1T43	1.516	13C43	13R43	13T43	1.516	2C43	2R43	2T43	1.516
1.406	1C45	1R45	1T45	1.578	13C45	13R45	13T45	1.578	2C45	2R45	2T45	1.578
1.469	1C47	1R47	1T47	1.641	13C47	13R47	13T47	1.641	2C47	2R47	2T47	1.641
1.531	1C49	1R49	1T49	1.703	13C49	13R49	13T49	1.703	2C49	2R49	2T49	1.703
1.594	1C51	1R51	1T51	1.766	13C51	13R51	13T51	1.766	2C51	2R51	2T51	1.766
1.656	1C53	1R53	1T53	1.828	13C53	13R53	13T53	1.828	2C53	2R53	2T53	1.828
1.719	1C55	1R55	1T55	1.891	13C55	13R55	13T55	1.891	2C55	2R55	2T55	1.891
1.781	1C57	1R57	1T57	1.953	13C57	13R57	13T57	1.953	2C57	2R57	2T57	1.953
1.844	1C59	1R59	1T59	2.016	13C59	13R59	13T59	2.016	2C59	2R59	2T59	2.016
1.906	1C61	1R61	1T61	2.078	13C61	13R61	13T61	2.078	2C61	2R61	2T61	2.078
1.969	1C63	1R63	1T63	2.141	13C63	13R63	13T63	2.141	2C63	2R63	2T63	2.141
2.031	1C65	1R65	1T65	2.203	13C65	13R65	13T65	2.203	2C65	2R65	2T65	2.203
2.094	1C67	1R67	1T67	2.266	13C67	13R67	13T67	2.266	2C67	2R67	2T67	2.266
2.156									2C69	2R69	2T69	2.328
2.219									2C71	2R71	2T71	2.391
2.281									2C73	2R73	2T73	2.453
2.344									2C75	2R75	2T75	2.516
2.406									2C77	2R77	2T77	2.578
2.469									2C79	2R79	2T79	2.641
2.531									2C81	2R81	2T81	2.703
2.594									2C83	2R83	2T83	2.766
2.656									2C85	2R85	2T85	2.828
2.719									2C87	2R87	2T87	2.891
2.781									2C89	2R89	2T89	2.953
2.844									2C91	2R91	2T91	3.016
2.906									2C93	2R93	2T93	3.078
2.969									2C95	2R95	2T95	3.141
3.031												

- /1/ DASH NUMBERS SHOWN ARE FOR STEEL ALLOY, 4037, 4130, 8630 OR 8740. DASH NUMBERS FOR STEEL ALLOY, 8740, ARE THE SAME EXCEPT SUBSTITUTE "S" FOR "C".
- /2/ DASH NUMBERS SHOWN ARE FOR TITANIUM ALLOY, Ti-6Al-4V, NO FINISH, DASH NUMBERS FOR TITANIUM ALLOY, Ti-6Al-4V, ALUMINUM COATED AND SOLID FILM LUBRICANT, ARE THE SAME EXCEPT SUBSTITUTE "A" FOR "T"
- /3/ DASH NUMBERS SHOWN ARE FOR CRES, PH13-8Mo, CHROME PLATED. DASH NUMBERS FOR CRES, PH13-8Mo, CLEANED DESCALED AND PASSIVATED, ARE THE SAME EXCEPT SUBSTITUTE "P" FOR "R".

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1

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SHEET 3



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