FEDERAL SUPPLY CLASS
5340

RATIONALE

AS85731/1 WAS WRITTEN TO PERMIT THE CANCELLATION AND SUPERSESSION OF MIL-F-85731/1 WITHOUT PART NUMBER CHANGE. THE MILITARY PREPARING ACTIVITY HAS DECIDED NOT TO ADOPT AS85731/1. USERS ARE RECOMMENDED TO USE MIL-F-85731/1 FOR THE SAME PART NUMBER REQUIREMENTS.

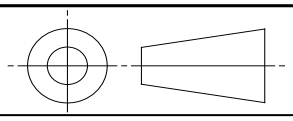
CANCELLATION NOTICE

THIS TECHNICAL REPORT HAS BEEN DECLARED "CANCELLED" AS OF DECEMBER 2015 AND HAS BEEN SUPERSEDED BY MIL-F-85731/1B. BY THIS ACTION, THIS DOCUMENT WILL REMAIN LISTED IN THE RESPECTIVE INDEX, IF APPLICABLE. CANCELLED TECHNICAL REPORTS ARE AVAILABLE FROM SAE.

ISSUED 2004-06 REVISED 2011-01 CANCELLED 2015-12

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS85731/1B

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C2

PROCUREMENT SPECIFICATION: AS85731

AEROSPACE STANDARD

FASTENER, ELECTRONIC EQUIPMENT, POSITIVE SELF-LOCKING

AS85731™/1
SUPERSEDED BY MIL-F-85731/1B

REV. B

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)** **Tel: +1 724-776-4970 (outside USA)**
Fax: 724-776-0790 **Email: CustomerService@sae.org** **SAE WEB ADDRESS: http://www.sae.org**

NOTICE

THE REQUIREMENTS FOR ACQUIRING THE COMPONENTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF AS85731

REQUIREMENTS

FIRST ARTICLE REQUIRED (SEE AS85731).

PERFORMANCE REQUIREMENTS:

THE FASTENER SHALL LOCK IN INCREMENTS OF NOT MORE THAN 30 DEGREES (FOR DASH NUMBERS -1 THROUGH -4, SEE TABLE 1) AND 15 DEGREES (FOR DASH NUMBERS -5 THROUGH -10, SEE TABLE 2).

THE FASTENER SHALL TIGHTEN BY TURNING THE KNOB CLOCKWISE. IT SHALL UNLOCK BY PULLING AND TURNING, OR IN SOME FASTENERS JUST TURNING THE KNOB COUNTER-CLOCKWISE. NO TOOL SHALL BE REQUIRED TO TIGHTEN, LOCK OR UNLOCK THE FASTENER.

THE FASTENER SHALL NOT UNLOCK WHEN A TORQUE OF 125 INCH-POUNDS IS APPLIED TO DASH NUMBERS -1 AND -2, OR WHEN 75 INCH-POUNDS IS APPLIED TO DASH NUMBERS -3 AND -4.

THE FASTENER SHALL MEET THE LOADS SPECIFIED IN TABLES 1, 2, 3, AND 4. ORIENTATION SHALL BE SUCH THAT THE LOAD LINE (THE LINE FROM THE PIN CENTER TO THE CONTACT POINT BETWEEN THEH LOCKING COLLAR AND THE EQUIPMENT HOOK) IS AT AN APPROXIMATE ANGLE OF 45 DEGREES, SEE FIGURE 1.

DESIGN REQUIREMENTS

THE CONFIGURATION OF THIS FASTENER SHALL PERMIT THE LATCH ASSEMBLY TO REMAIN ORIENTED IN A POSITION SO AS NOT TO INTERFERE WITH THE INSTALLATION OR REMOVAL OF THE WEAPON REPLACEABLE ASSEMBLY (WRA).

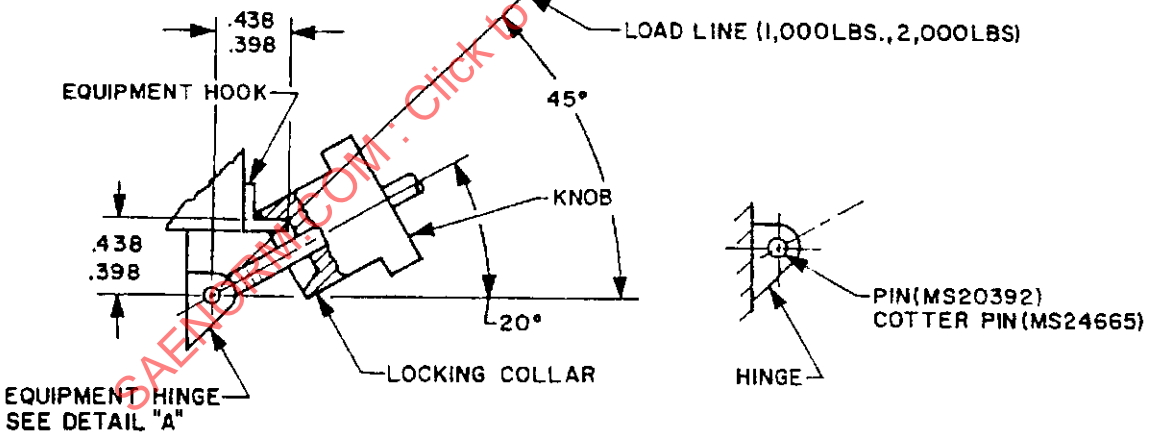


FIGURE 1 - FASTENER CONFIGURATION

THREADS SHALL BE PER MIL-S-7742 OR MIL-S-8879, UNF-2A, UNF-3A OR UNJF-3A AND HEAT TREATED.

MATERIALS

SCREW CORROSION RESISTANT STEEL (CRES) 316 (UNS S31600) IN ACCORDANCE WITH QQ-S-763 CONDITION A OR, 17-4 PH (UNS S17400) IN ACCORDANCE WITH SAE-AMS 5643 CONDITION H1025.

WASHER NYLON 6/6 IN ACCORDANCE WITH L-P-410.

NAS 1515 H5H PLASTIC OR SYNTHETIC RUBBER.

KNOB

CRES: CRES 316 (UNS S31600) PER QQ-S-763 CONDITION A OR PM SS316L.

ALUMINUM: ALUMINUM ALLOY 2024 T4 (UNS A92024) PER QQ-A-225/6, OR

ALUMINUM ALLOY 2024 T3511 (UNS A92024) PER QQ-A-200/3.

WASHER STOP CRES 301 (UNS S30100) OR 302 (UNS S30200) IN ACCORDANCE WITH SAE-AMS5901 OR SAE-AMS5516 RESPECTIVELY.

LOCKING COLLAR CRES 316 (UNS S31600) OR CRES 304 (UNS S30400) PER QQ-S-763 CONDITION A. OPTIONAL MATERIAL: CRES 15-5PH PER SAE-AMS 5357, CONDITION H1000 ROCKWELL HARDNESS C33-39; OR PM SS316L.

RETAINING RING PH15-7 MO PER SAE-AMS5520.

HOOK ALLOY STEEL:

4130 ALLOY STEEL (UNS G41300) PER MIL-S-6758, OR MIL-S-18729; OR

4140 ALLOY STEEL UNS G41400) (INVESTMENT CASTING) PER MIL-S-5626.

HEAT TREAT PER MIL-H-6875 TO ROCKWELL HARDNESS C39-43.

CORROSION RESISTANT STEEL (CRES):

CRES 410 (UNS S41000) CONDITION T, PER QQ-S-763 OR ASTM A240 CLASS 410;

CRES 17-4PH (UNS S17400) PER SAE-AMS5343, SAE-AMS5643 OR MIL-S-81591; OR

CRES 17-7PH (UNS S17700) PER MIL-S-25043 OR SAE-AMS5528.

HEAT TREAT PER MIL-H-6875 AS FOLLOWS:

CRES 410 - ROCKWELL HARDNESS C39 MINIMUM;

CRES 17-4PH (WROUGHT) - TO CONDITION H1025, ROCKWELL HARDNESS C34-42;

CRES 17-4PH (CAST) - TO CONDITION H1000, ROCKWELL HARDNESS C36-43; OR

CRES 17-7PH - TO CONDITION H1000 OR TH1050 PER SAE-AMS 2759 OR MIL-S-25043.

SPACER STOP CRES 303S (UNS S30300) OR 303SE (UNS S30323) PER ASTM A582, CONDITION A OR

ASTM A484; CRES 304 (UNS S30400) PER ASTM A269.

HINGE ALLOY STEEL:

4140 ALLOY STEEL (UNS G41400) PER MIL-S-5626.

HEAT TREAT PER MIL-H-6875 ROCKWELL HARDNESS C39-43.

CRES:

CRES 17-4PH (UNS S17400) PER SAE-AMS 5643 OR SAE-AMS5343.

HEAT TREAT PER MIL-H-6875 TO CONDITION H1025

(WROUGHT - ROCKWELL HARDNESS C34-42) OR CONDITION H1000

(CAST - ROCKWELL HARDNESS C36-43).

FINISH

ALL CRES COMPONENTS: PASSIVATE IN ACCORDANCE WITH QQ-P-35 EXCEPT PM PMA SS 316L-4 SINTERED CRES PARTS.

ALUMINUM COMPONENTS: ANODIZE IN ACCORDANCE WITH MIL-A-8625, TYPE II, CLASS 1 OR TYPE III, CLASS 1 OR 2.

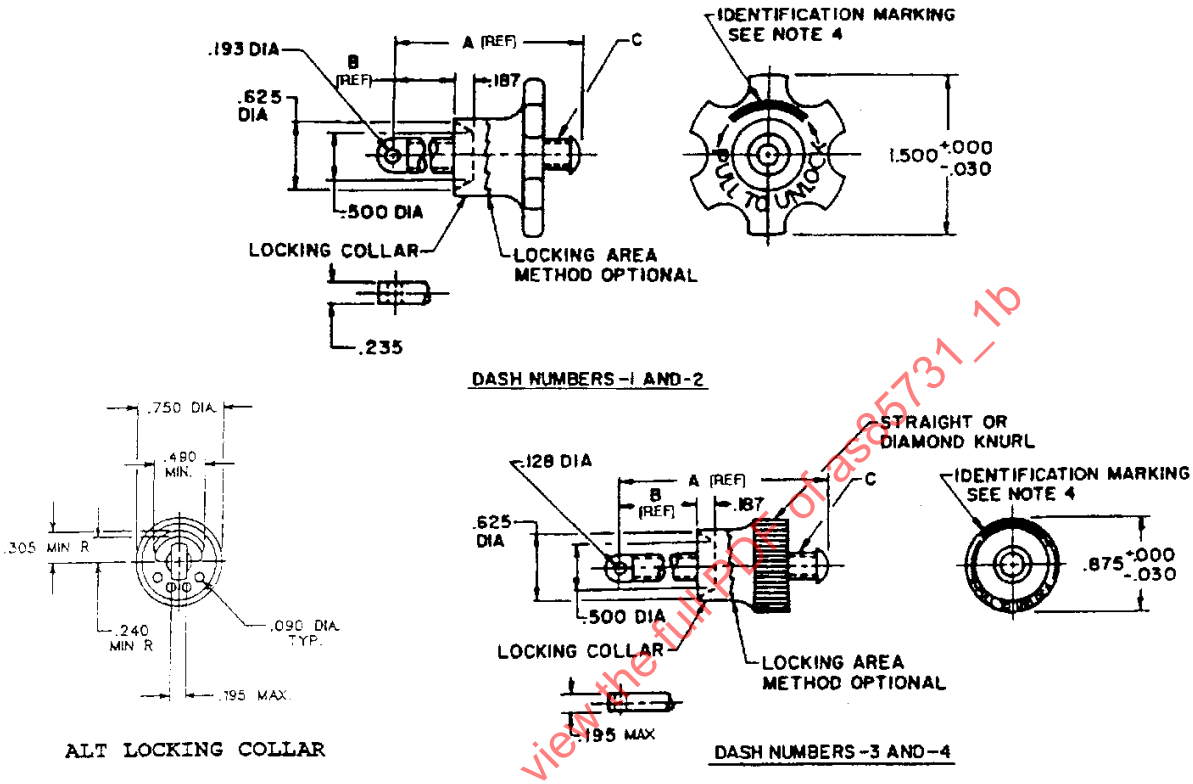


FIGURE 2 – DASH NUMBERS 1 THROUGH 4

TABLE 1 – FASTENERS

DASH NO.	A (REF)	B (REF)	C THREADS	LOAD (LBS MIN)	MAX WT (OUNCES)
-1	1.88	1.00	.312-24	2000	3
-2	2.75	1.88	.312-24	2000	3
-3	1.88	1.00	.250-28	1000	2.5
-4	2.75	1.88	.250-28	1000	2.5

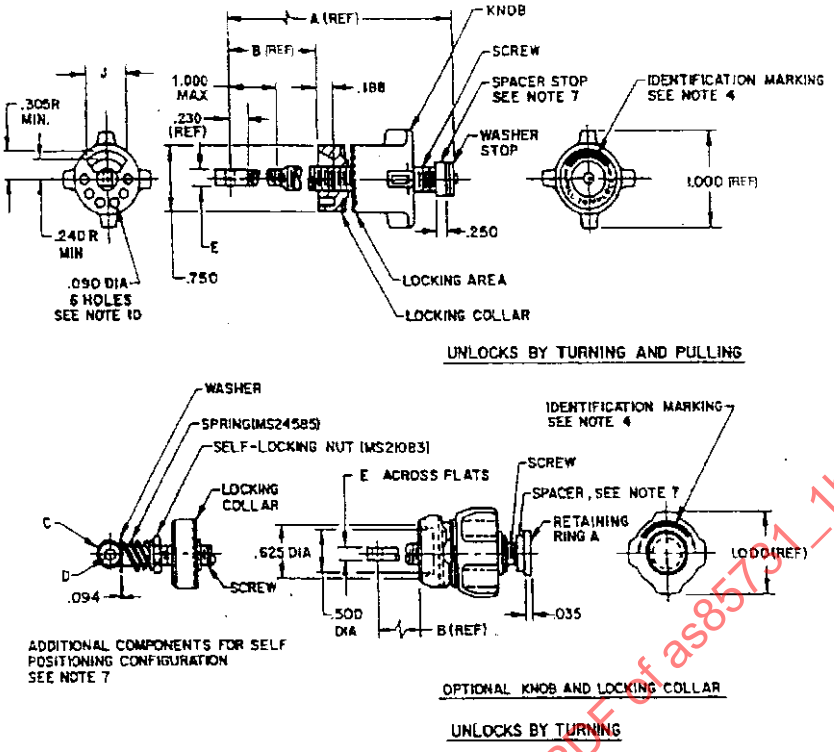


FIGURE 3 – DASH NUMBERS -5 THROUGH -10

TABLE 2 – FASTENERS

DASH NO.	A	* B (REF)	THREADS (REF)	C RAD.	D +.003 - .000	E	J FLAT MIN.	LOAD (LBS)
-5	2.03	1.000	.250-28 1/	.156	.128	.156	.490	1000
-6	2.41	1.375	.250-28 1/	.156	.128	.156	.490	1000
-7	2.91	1.875	.250-28 1/	.156	.128	.156	.490	1000
-8	2.03	1.000	.312-24	.190	.160	.183	.490	2000
-9	2.41	1.375	.312-24	.190	.160	.183	.490	2000
-10	2.91	1.875	.312-24	.190	.160	.183	.490	2000

1/ .312-24 THREADS SHALL BE OPTIONAL FOR -5, -6, AND -7.
* SEE NOTE 7,.

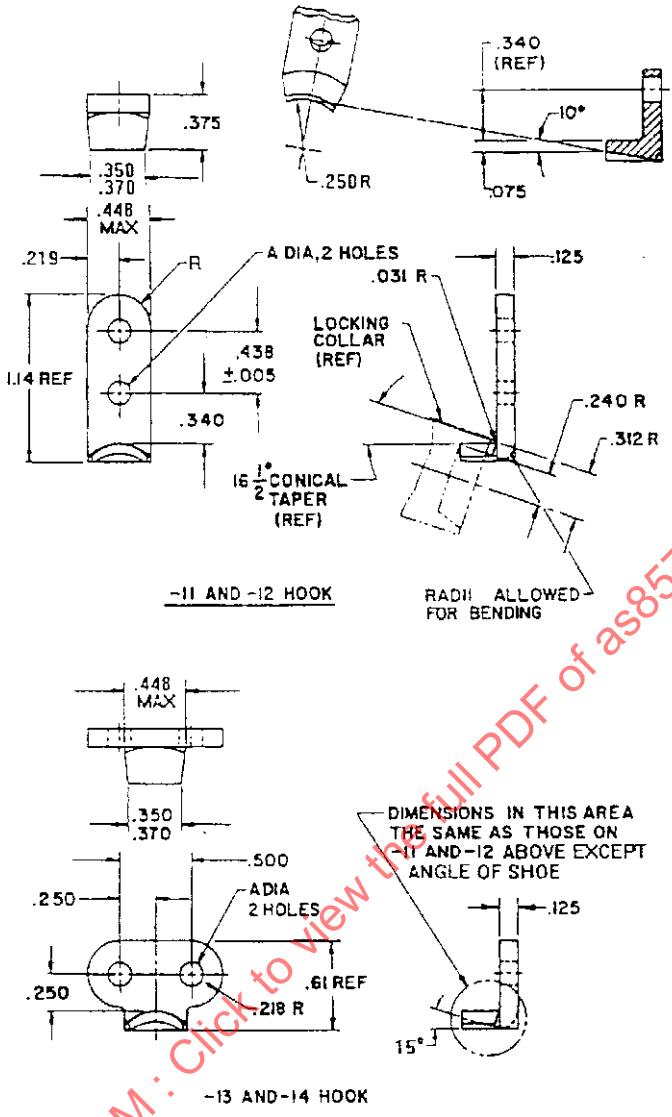


FIGURE 4 – DASH NUMBERS -11 THROUGH -14.

TABLE 3 – HOOKS

DASH NO		A	LOAD (LBS MIN)	MATING LATCH ASSY
STEEL	CRES			
-11	-11C	.167-.172	1000	-3, -4, -5, -6, -7
-12	-12C	.193-.198	2000	-1, -2, -8, -9, -10
-13	-13C	.167-.172	1000	-3, -4, -5, -6, -7
-14	-14C	.193-.198	2000	-1, -2, -8, -9, -10