De Havilland Aircraft Drawing Office Instructions, as copied from the library of DHA, Bankstown, NSW, Australia. This document may have local amendments making it differ from the United Kingdom-origin material. 'Recognise text' has been run on this document; it has been somewhat successful. Don't consider text searches conclusive, for example. The documents would have been used at Bankstown for Mosquito (Royal Australian Air Force), Vampire (RAAF and Royal Australian Navy) and Drover (a civilian type) development and production, and for maintenance support of other DH types such as Sea Venom (RAN). Period of use would 1940s through to 1960s.

De Havilland Aircraft, Aircraft Technical Specifications, DH.100 Vampire, DH.115 Vampire, DH.98 Mosquito, DHA3 Drover

De Havilland

Drawing Office Instruction Sheets

ADS 49-52

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THE DE HAVILLAND AIRCRAFT PTY., LTD., AUSTRALIA
AIRCRAFT DIVISION

DRAWING OFFICE INSTRUCTION SHEETS

INDEX

DATE: 4-9-42	TITLE:						
DRAWN: J.K.W.							
CHECKED: LAB.	ISSUE NO.:						

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.

AIRCRAFT DIVISION.

AUSTRALIAN DATA SHEETS.

INDEX.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

STANDARD WIRE GAUGES.

S.W.G.	IN.	S.W.G.	IN.	S.W.G.	IN.	S.W.G.	IN.
1	·300	9	·144	17	·056	25	·020
2	·276	10	·128	18	·048	26	·018
3	·252	11	·116	19	·040	27	·0164
4	·232	12	·104	20	·036	28	·0148
5	·212	13	·092	21	·032	29	·0136
6	·192	14	·080	22	·028	30	·0124
7	·176	15	·072	23	·024		
8	·160	16	·064	24	·022		

FRACTIONS & DECIMAL EQUIVALENTS.

1/64	·015625
1/32	·03125
3/64	·046875
1/16	·0625
5/64	·078125
3/32	·09375
7/64	·109375
1/8	·125
9/64	·140625
5/32	·15625
11/64	·171875
3/16	·1875
13/64	·203125
7/32	·21875
15/64	·234375
1/4	·25
17/64	·265625
9/32	·28125
19/64	·296875
5/16	·3125
21/64	·328125
11/32	·34375
23/64	·359375
3/8	·375
25/64	·390625
13/32	·40625
27/64	·421875
7/16	·4375
29/64	·453125
15/32	·46875
31/64	·484375
1/2	·500000
33/64	·515625
17/32	·53125
35/64	·546875
9/16	·5625
37/64	·578125
19/32	·59375
39/64	·609375
5/8	·625
41/64	·640625
21/32	·65625
43/64	·671875
11/16	·6875
45/64	·703125
23/32	·71875
47/64	·734375
3/4	·75
49/64	·765625
25/32	·78125
51/64	·796875
13/16	·8125
53/64	·828125
27/32	·84375
55/64	·859375
7/8	·875
57/64	·890625
29/32	·90625
59/64	·921875
15/16	·9375
61/64	·953125
31/32	·96875
63/64	·984375
1	1.000000

DATE 26.8.42.	TITLE STANDARD WIRE GAUGE. FRACTIONS & DECIMAL EQUIVALENTS.	ADS. No 1.
DRAWN. T. S.J.		
CHECKED E.C.M.	ISSUE No. 1	COPIED FROM. A.D.S. DATA SHEET No. 2.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

LETTER DRILLS	INCHES	NUMBER	INCHES	NUMBER	INCHES	NUMBER	INCHES
Z	·413	1	·228	27	·144	53	·0595
Y	·404	2	·221	28	·1405	54	·055
X	·397	3	·213	29	·136	55	·052
W	·386	4	·209	30	·1285	56	0465
V	·377	5	·2055	31	·120	57	·043
U	·368	6	204	32	·116	58	·042
T	·358	7	201	33	·113	59	·041
S	·348	8	·199	34	111	60	·040
R	·339	9	·196	35	·110	61	039
Q	·332	10	·1935	36	·1065	62	·038
P	·323	11	·191	37	·104	63	·037
O	·316	12	·189	38	·1015	64	036
N	302	13	185	39	·0995	65	035
M	·295	14	182	40	·098	66	033
L	·290	15	·180	41	096	67	·032
K	281	16	·177	42	0935	68	031
J	·277	17	·173	43	089	69	·02925
I	·272	18	·1695	44	086	70	·028
H	266	19	·166	45	082	71	·026
G	261	20	161	46	081	72	·025
F	·257	21	159	47	·0785	73	024
E	250	22	157	48	·076	74	·0225
D	·246	23	154	49	·073	75	·021
C	·242	24	·152	50	·070	76	·020
B	·238	25	·1495	51	·067	77	018
A	·234	26	·147	52	·0635	78	·016
						79	·0145
						80	0135

DATE 25 8 42	TITLE DRILL SIZES	ADS 2
DRAWN B P M		
CHECKED E.C.M.	ISSUE No 1	TRACED FROM Data Sht No 7.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DATE: 28:8:42
DRAWN: S.L.
CHECKED: E.C.W.

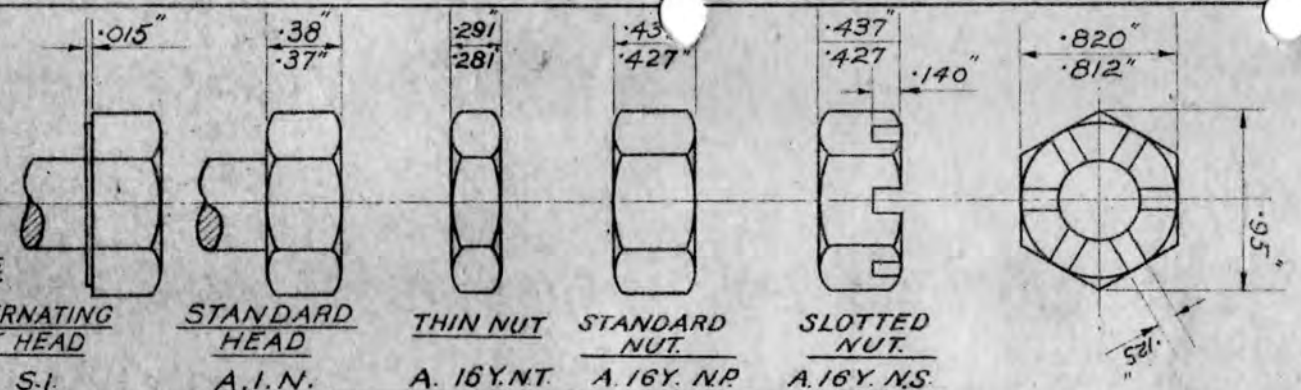
ISSUE No: 1

TITLE: STANDARD SIZES OF BOLTS, NUTS, WASHERS AND SPLIT PINS.

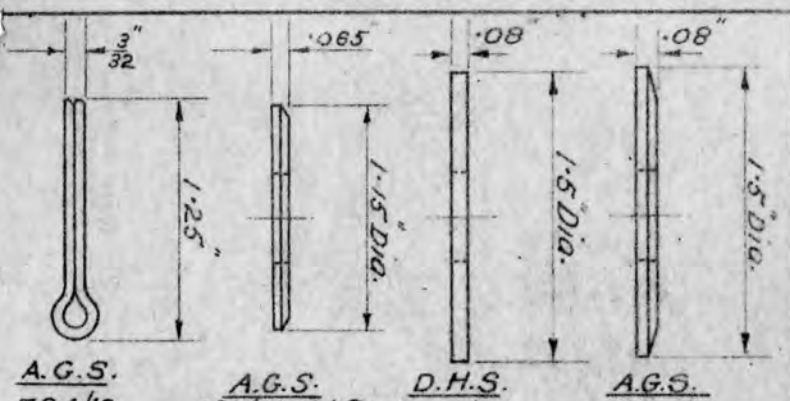
ADS. No 3.

TRACED FROM: DATA SHEET No 5.

1/2 DIA. B.S.F.

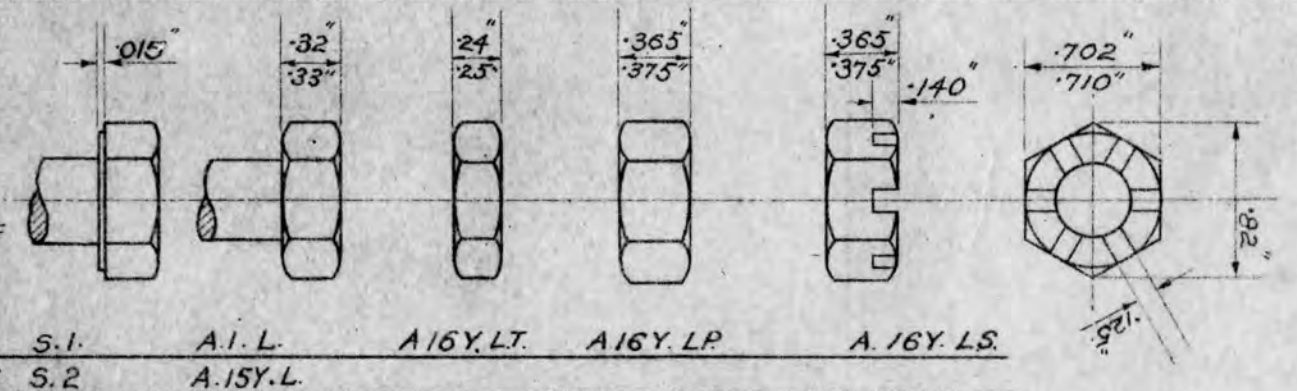


ALTERNATING BOLT HEAD	STANDARD HEAD	THIN NUT	STANDARD NUT.	SLOTTED NUT.
M.S. S.1.	A.1.N.	A. 16Y.N.T.	A. 16Y. N.P.	A.16Y. N.S.
H.T.S. S.2.	A.15Y/N			
S.S. S80	A.15Z/N	A. 16Z.N.T.	A16Z N.P.	A. 16Z. N.S.

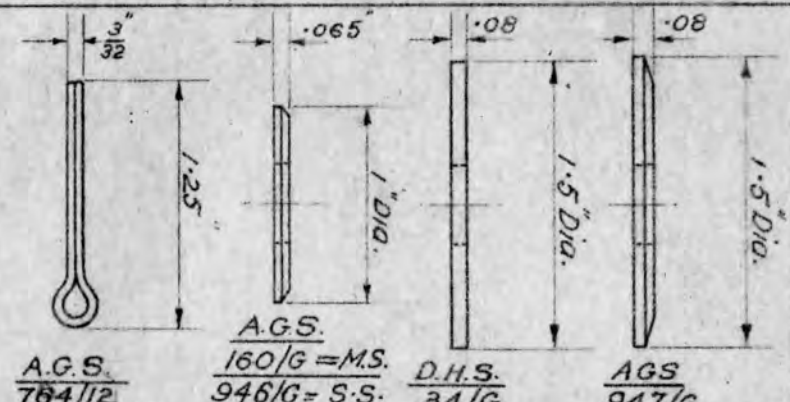


A.G.S. 784/12 S.S.	A.G.S. 160/H = M.S. 946/H = S.S.	D.H.S. 34/H ALCLAD	A.G.S. 947/H S.S.

7/16 DIA BSF

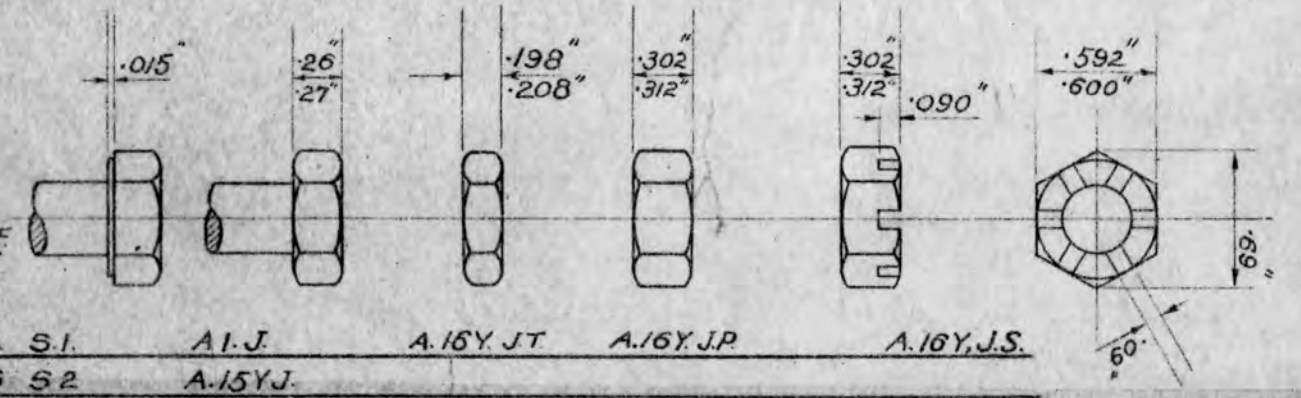


M.S. S.1.	A.1.L.	A16Y.L.T.	A16Y.L.P.	A.16Y.L.S.
HTS S.2	A.15Y.L.			
S.S. S.8D.	A.15Z.L.	A.16Z.LT.	A.16Z L.P.	A.16Z. L.S.

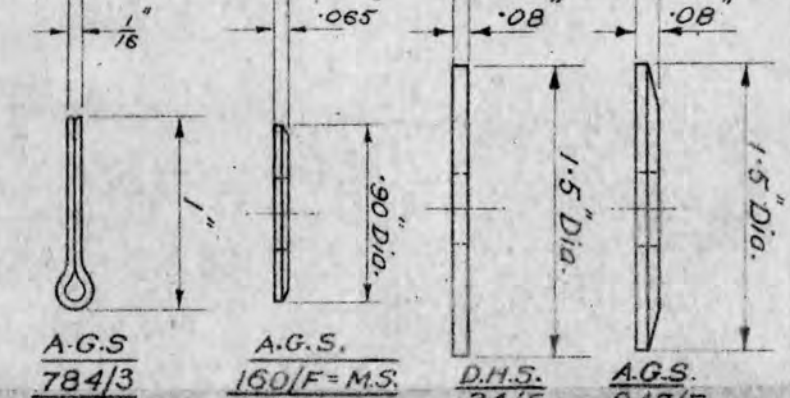


A.G.S. 784/12 S.S.	A.G.S. 160/G = M.S. 946/G = S.S.	D.H.S. 34/G ALCLAD	AGS 947/G S.S

3/8 DIA. B.S.F.

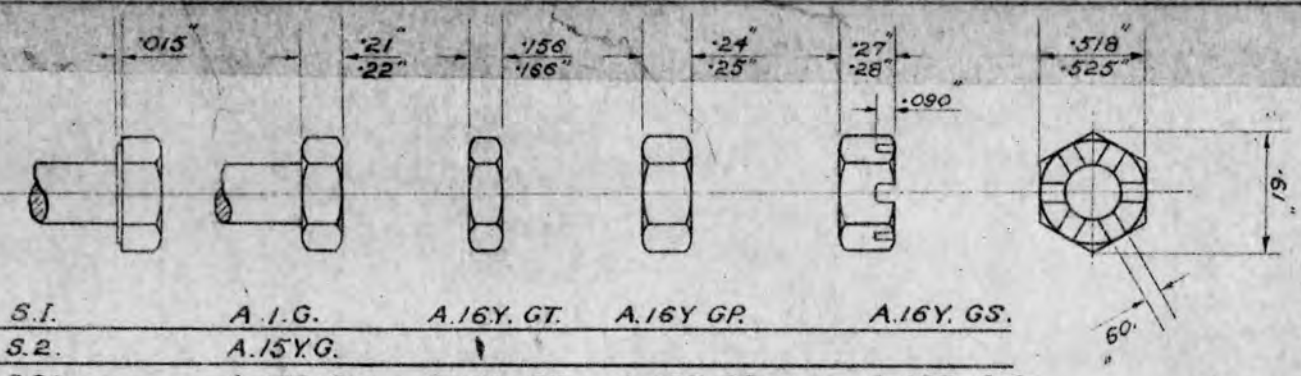


M.S. S.1.	A.1.J.	A.16Y. J.T.	A.16Y. J.P.	A.16Y, J.S.
H.T.S S.2	A.15YJ.			
S.S. S 80	A 15Z J	A. 16Z.J.T.	A.16Z J.P.	A.16Z J.S.

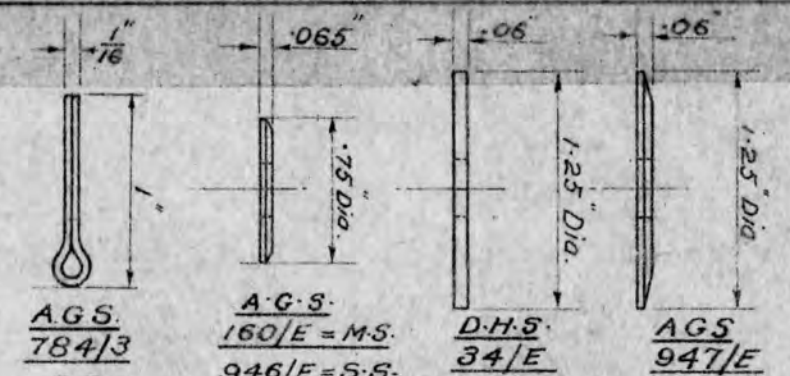


A.G.S 784/3 S.S.	A.G.S. 160/F = M.S. 946/F = S.S.	D.H.S. 34/F ALCLAD	A.G.S. 947/F S.S.

5/16 DIA. B.S.F.



M.S. S.I.	A.1.G.	A.16Y. G.T.	A.16Y G.P.	A.16Y. G.S.
H.T.S. S.2.	A.15Y.G.			
S.S. S.80.	A.15Z.G.	A.16Z. G.T.	A.16Z G.P.	A.16Z. G.S.



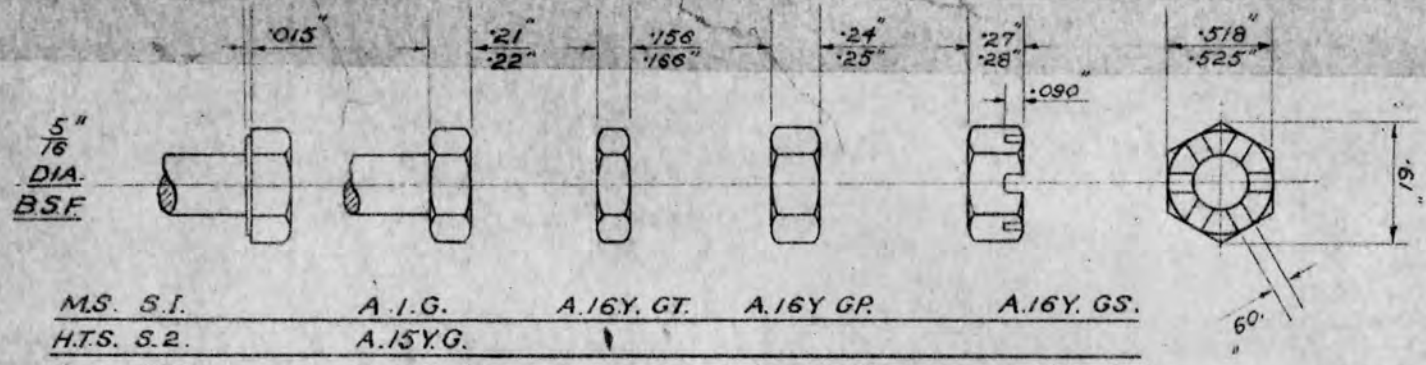
A.G.S. 784/3 S.S.	A.G.S. 160/E = M.S. 946/E = S.S.	D.H.S. 34/E ALCLAD	AGS 947/E S.S.

1/4 DIA B.S.F.

M.S. S.1	A.1.E	A 16Y ET	A.16Y E.P.	A.16Y. ES.
H.T.S. S.2.	A.15Y E			

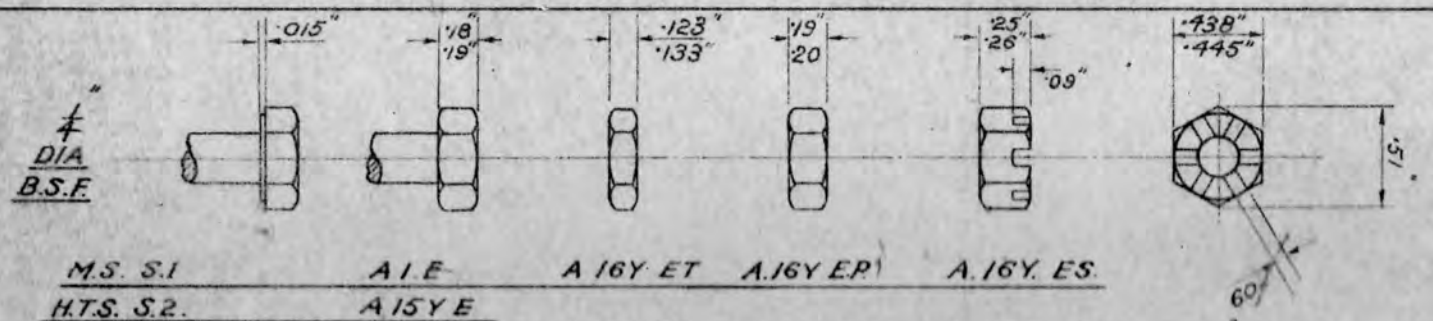
A.G.S 784/2	A.G.S. 160/D. M.S	D.H.S. 34/D	A.G.S. 947/D

5/16" DIA. BSF



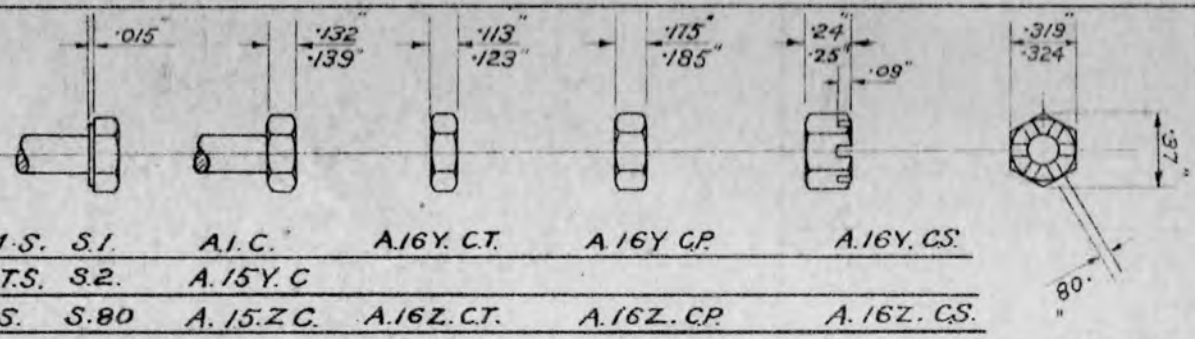
M.S. S.1.	A.1.G.	A.16Y. GT.	A.16Y GP.	A.16Y. GS.	A.G.S. 784/3 S.S.	A·G·S· 160/E = M.S. 946/E = S·S·	D·H·S· 34/E ALCLAD	AGS 947/E S·S·
H.T.S. S.2.	A.15Y.G.							
S.S. S.80.	A.15Z.G.	A.16Z. GT.	A.16Z GP.	A.16Z. G.S.				

1/4" DIA BSF



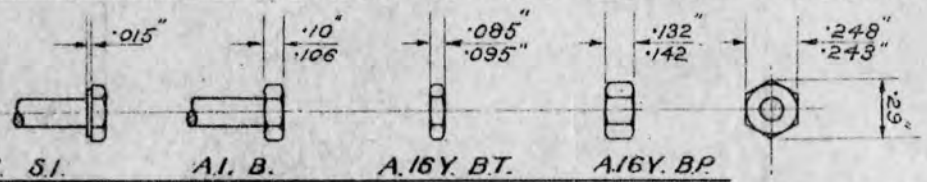
M.S. S.1	A.1.E	A.16Y. ET	A.16Y E.P.	A.16Y. ES.	A.G.S 784/2 S.S.	A.G.S. 160/D. M.S 946/D. S.S.	D.H.S 34/D ALCLAD.	A.G.S. 947/D S.S.
H.T.S. S.2.	A.15Y.E							
S.S. S.80	A.15Z.E	A.16Z.ET	A.16Z.EP.	A.16Z. ES.				

2 B.A.



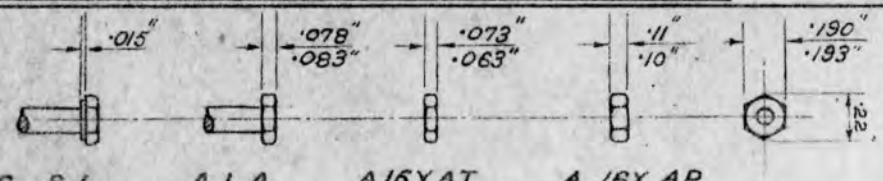
M.S. S.1.	A.1.C.	A.16Y. C.T.	A.16Y C.P.	A.16Y. C.S.	A.G.S. 784/2 S.S.	A.G.S. 160/C.=M.S. 946/C=S.S.	D.H.S. 34/C. ALCLAD.	A.G.S. 947/C S.S
H.T.S. S.2.	A.15Y.C							
S.S. S.80	A.15.Z C.	A.16Z. C.T.	A.16Z. C.P.	A.16Z. C.S.				

4 B.A.



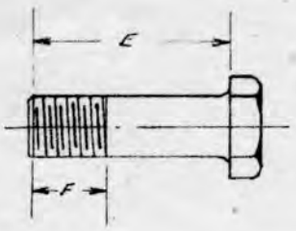
M.S. S.1.	A.1. B.	A.16Y. B.T.	A.16Y. B.P.	A.G.S 160/B = M.S. 946/B = S.S.	D.H.S. 34/B ALCLAD	A.G.S. 947/B S.S	
H.T.S. S.2.	A.15Y. B.						
S.S. S.80.	A.15Z. B.	A.16Z B.T.	A.16Z. B.P.				

6 B.A.



M.S. S.1.	A.1.A.	A.16Y.A.T.	A. 16Y. AP	A.G.S. 160/A - M.S. 946/A - S.S.	D.H.S 34/A ALCLAD	A.G.S. 947/A S.S	
H.T.S. S.2.	A.15Y. A.						
S.S. S.80.	A.15Z A.	A.16Z AT.	A.16Z AP.				

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



6BA			4BA			2BA			$\frac{7}{32}$" BSF			$\frac{1}{4}$" BSF		
PART Nº	E INS.	F INS	PART Nº	E IN.	F INS.	PART Nº	E INS	F INS	PART Nº	E INS	F INS	PART Nº	E INS	F INS.
A 4	·4	·35	B 4	·4	·35	C 4	·4	35	D4	·4	·35	E4	·4	·35
A 6	·6	·45	B 6	·6	·45	C 6	·6	·50	D6	·6	·55	E6	·6	·55
A 8	·8	·45	B 8	·8	·45	C 8	·8	·50	D8	·8	·55	E8	·8	·55
A 10	1·0	·45	B 10	1·0	·45	C 10	1·0	·50	D10	1·0	·55	E10	1·0	·55
A 14	1·4	·65	B 14	1·4	·65	C 14	1·4	·70	D14	1·4	·75	E14	1·4	·75
A 18	1·8	·65	B 18	1·8	·65	C 18	1·8	·70	D18	1·8	·75	E18	1·8	·75
A 22	2·2	·65	B 22	2·2	·65	C 22	2·2	·70	D22	2·2	·75	E22	2·2	·75
A 26	2·6	·65	B 26	2·6	65	C 26	2·6	·70	D26	2·6	·75	E26	2·6	·75
A 30	3·0	65	B 30	3·0	·65	C 30	3·0	·70	D30	3·0	·75	E30	3·0	·75
A 35	3·5	·70	B 35	3·5	·70	C 35	3·5	·80	D35	3·5	·80	E35	3·5	80
A 40	4·0	·70	B 40	4·0	·70	C 40	4·0	·80	D40	4·0	·80	E40	4·0	80
A 45	4·5	·70	B 45	4·5	·70	C 45	4·5	·80	D45	4·5	·80	E45	4·5	·80
A 50	5·0	·70	B 50	5·0	·70	C 50	5·0	·80	D50	5·0	·80	E50	5·0	·80
A 55	5·5	1·00	B 55	5·5	1·00	C 55	5·5	1·00	D55	5·5	1·00	E55	5·5	1·00
A 60	6·0	1·00	B 60	6·0	1·00	C 60	6·0	1·00	D60	6·0	1·00	E60	6·0	1·00

$\frac{9}{32}$" BSF			$\frac{5}{16}$" BSF			$\frac{3}{8}$" BSF			$\frac{7}{16}$" BSF			$\frac{1}{2}$" BSF		
PART Nº	E INS	F INS	PART Nº	E. INS	F INS	PART Nº	E. INS.	F INS.	PART Nº	E INS	F INS	PART Nº	E INS.	F INS.
F 4	·4	·35	G 4	·4	·35									
F 6	·6	·60	G 6	·6	·60	J 6	·6	·55						
F 8	·8	·60	G 8	·8	·60	J 8	·8	·65	L 8	·8	·70	N8	·8	·75
F 10	1·0	·60	G 10	1·0	·60	J 10	1·0	·65	L 10	1·0	·70	N10	1·0	·75
F 14	1·4	·80	G 14	1·4	·80	J 14	1·4	85	L 14	1·4	90	N14	1·4	1·00
F 18	1·8	·80	G 18	1·8	·80	J 18	1·8	85	L 18	1·8	·90	N 18	1·8	1·00
F 22	2·2	·80	G 22	2·2	·80	J 22	2·2	85	L 22	2·2	·90	N 22	2·2	1·00
F 26	2·6	·80	G 26	2·6	·80	J 26	2·6	85	L 26	2·6	·90	N 26	2·6	1·00
F 30	3·0	·80	G 30	3·0	·80	J 30	3·0	·85	L 30	3·0	·90	N 30	3·0	1·00
F 35	3·5	·90	G 35	3·5	·90	J 35	3·5	·95	L 35	3·5	1·05	N 35	3·5	1·10
F 40	4·0	·90	G 40	4·0	·90	J 40	4·0	·95	L 40	4·0	1·05	N 40	4·0	1·10
F 45	4·5	90	G 45	4·5	·90	J 45	4·5	·95	L 45	4·5	1·05	N 45	4·5	1·10
F 50	5·0	·90	G 50	5·0	·90	J 50	5·0	·95	L 50	5·0	1·05	N 50	5·0	1·10
F 55	5·5	1·00	G 55	5·5	1·00	J 55	5·5	1·00	L 55	5·5	1·05	N 55	5·5	1·10
F 60	6·0	1·00	G 60	6·0	1·00	J 60	6·0	1·00	L 60	6·0	1·05	N 60	6·0	1·10

MATERIAL :—

MILD STEEL TO SPECN S1.

MARKING —

ALL BOLTS OF ¼" NORMAL SIZE & OVER SHALL HAVE THE APPROPIATE PART NUMBER APPLIED ON THE UPPER FACE OF THE HEAD

STANDARD FINISH —

ZINC OR CADMIUM.

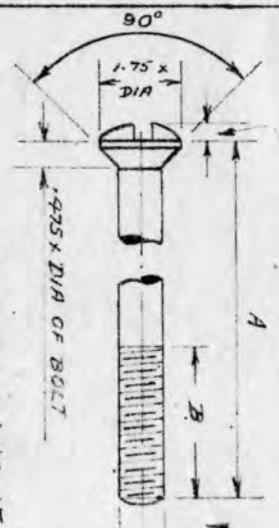
DATE 27-8-42	TITLE STANDARD BOLTS. 4A1	ADS 4A. SHEET 1.
DRAWN LAB.		
CHECKED ECM.	ISSUE Nº	COPIED FROM A.P.C. Data Nº 15

SIZE	4BA			2BA			¼ BSF			5/16 BSF			3/8" BSF			7/16 BSF			½ BSF		
Mk.	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'	'A'	'B'	'C'
B	·4	·28	·28	·4	·26	·26	·4	·23	·23	4	·20	·20									
C	·6	·48	·48	·6	·46	·46	·6	·43	·43	·6	·40	·40	·6	·37	·37						
D	·8	·50	·50	·8	·50	·50	·8	·55	·55	·8	·60	·60	·8	·57	·57	·8	·54	·54	·8	·52	·52
E	1·0	·50	·50	1·0	·50	·50	1·0	·55	·55	1·0	·60	·60	1·0	·65	·65	1·0	·70	·70	1·0	·72.	·72
G	1·4	·70	·70	1·4	·70	·70	1·4	·75	·75	1·4	·80	·80	1·4	·85	·85	1·4	·90	·90	1·4	1·0	1·0
I	1·8	·70	·70	1·8	·70	·70	1·8	·75	·75	1·8	·80	·80	1·8	·85	·85	1·8	·90	·90	1·8	1·0	1·0
K	2·2	·70	·70	2·2	·70	·70	2·2	·75	·75	2·2	·80	·80	2·2	·85	·85	2·2	·90	·90	2·2	1·0	1·0
M	2·6	·70	·70	2·6	·70	·70	2·6	·75	·75	2·6	·80	·80	2·6	·85	·85	2·6	·90	·90	2·6	1·0	1·0
O	3·0	·70	·70	3·0	·70	·70	3·0	·75	·75	3·0	·80	·80	3·0	·85	·85	3·0	·90	·90	3·0	1·0	1·0
P	1·1*	1·0	·90																		
Q	3·5		·50	3·5	·80	·80	3·5	·80	·80	3·5	·90	·90	3·5	·95	·95	3·5	1·05	1·05	3·5	1·10	1·10
R							3·75	·80													
S				4·0	·80	·80	4·0	·80	·80	4·0	·90	·90	4·0	·95	·95	4·0	1·05	1·05	4·0	1·10	1·10
U				4·5	·80	·80	4·5	·80	·80	4·5	·90	·90	4·5	·95	·95	4·5	1·05	1·05	4·5	1·10	1·10
W				5·0	·80	·80	5·0	·80	·80	5·0	·90	·90	5·0	·95	·95	5·0	1·05	1·05	5·0	1·10	1·10
X				5·5	1·0	1·0	5·5	1·0	1·0	5·5	1·0	1·0	5·5	1·0	1·0	5·5	1·05	1·05	5·5	1·10	1·10
Y				6·0	1·0	1·0	6·0	1·0	1·0	6·0	1·0	1·0	6·0	1·0	1·0	6·0	1·05	1·05	6·0	1·10	1·10
J							2·1	·65													

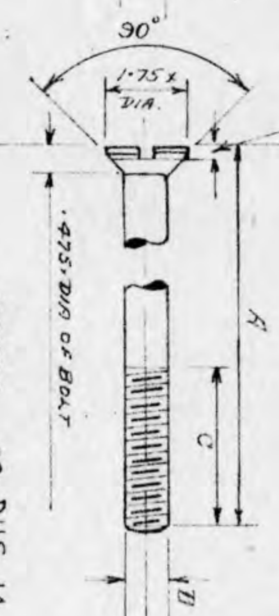
* 1·4" ON. H31587.

CALL UP :- H22629C – 2BA.
H31587 C – 2BA

SHANKS & THREADS. CONFORM TO BRITISH ENGINEERING STANDARDS. ASSOCIATION DIMENSIONS & LIMITS FOR BOLTS MADE TO SPECIFICATION A1 BUT TO HAVE C'SK HEADS OF THE PROPORTION GIVEN.



H22629 OR D.H.S. 15



H31587 OR D.H.S. 14.

D	4BA & 2BA	¼ & 5/16 BSF	3/8 & 7/16 BSF	½" BSF
DEPTH	·03	·06	·09	·11
WIDTH	·03	·06	·06	·09

DIMS OF SAW CUT

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DATE 28.8.42.
DRAWN LAB.
CHECKED ECN
TITLE STANDARD BOLTS H22629 & H31587
ISSUE No 1.
ADS 4B
COPIED FROM. Drawings

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

PART NUMBERS FOR NUTS TO SPECIFICATION A16.

TYPE	ORDINARY		THIN		SLOTTED	CASTLE
SIZE	RT. HD. THREAD	LT. HD. THREAD	RT. HD. THREAD	LT. HD. THREAD	RT. HD. THREAD	RT. HD. THREAD.
6 BA	AP	APL	AT	ATL		
4 BA	BP	BPL	BT	BTL		
2 BA	CP	CPL	CT	CTL	CS	
$\frac{7}{32}$" B.S.F.	DP	DPL	DT	DTL	DS	DC
$\frac{1}{4}$" B.S.F.	EP	EPL	ET	ETL	ES	EC
$\frac{9}{32}$" B.S.F.	FP	FPL	FT	FTL	FS	FC
$\frac{5}{16}$" B.S.F.	GP	GPL	GT	GTL	GS	GC
$\frac{3}{8}$" B.S.F.	JP	JPL	JT	JTL	JS	JC
$\frac{7}{16}$" B.S.F.	LP	LPL	LT	LTL	LS	LC
$\frac{1}{2}$" B.S.F.	NP	NPL	NT	NTL	NS	NC

MATERIAL.

(I). MILD STEEL TO SPEC N S.I.

(II). STAINLESS STEEL TO SPEC N S80.

MARKINGS.

(1). ALL NUTS OVER $\frac{3}{8}$" NOMINAL SIZE SHALL HAVE THE APPROPRIATE PART NUMBER APPLIED TO ONE OF THE HEXAGONAL FACES.

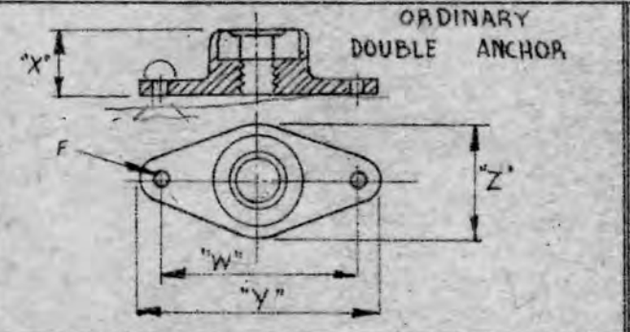
(2). NUTS MADE FROM STAINLESS STEEL SHALL IN ADDITION BE MARKED WITH THE LETTER "Z" PRECEDING THE PART NUMBER.

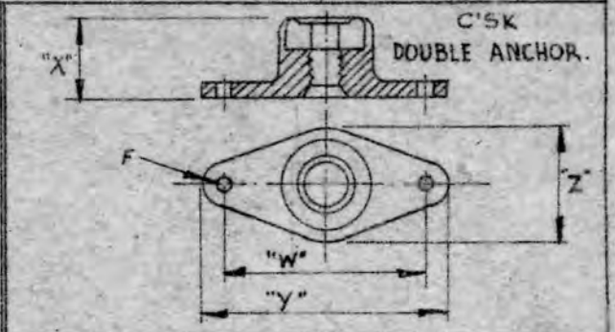
ANTI - CORROSION COATING.

UNLESS OTHERWISE ORDERED, ALL FINISHED NUTS IN S.I. STEEL SHALL BE UNIFORMLY COATED WITH ZINC OR CADMIUM BY AN APPROVED PROCESS.

DATE. 29.8.42.	TITLE STANDARD NUTS. A.16. 6BA TO $\frac{1}{2}$" B.S.F.	ADS. 5.
DRAWN T.S.J.		
CHECKED [illegible]	ISSUE No. 1	TRACED FROM DATA SHEET No 16.

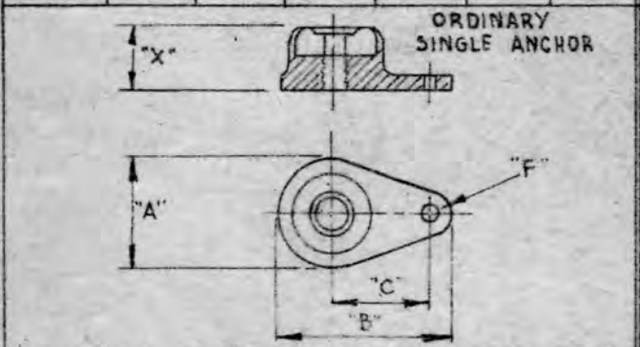
THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA

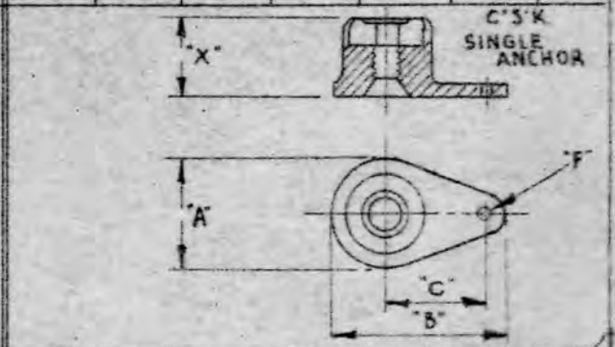




SIZE	TYPE	W	X	Y	Z	F
6 BA	A.G	·500	·130	·680	·26	·065
4 BA	B.G.	·700	·180	·940	·375	·096
2 BA	C.G.	·700	·250	·940	·375	·096
7/32" B.S.F.	D.G.					
1/4" B.S.F.	E.G.	1·00	·260	1·24	·50	·096
9/32" B.S.F	F.G.	1·00	·300	1·24	·56	·096
5/16" B.S.F	G.G	1·10	·350	1·35	·60	·096
3/8" B.S.F.	J.G	1·00	·400	1·31	·625	·096
7/16" B.S.F.	L.G.	1·20	·530	1·57	·75	·125
1/2" B.S.F.	N.G.	1·30	·590	1·67	·875	·125
9/16" B.S.F.	P.G.					
5/8" B.S.F.	Q.G.					
11/16" B.S.F	R.G.					
3/4" B.S.F	S.G.					
13/16" B.S.F.	T.G.					
7/8" B.S.F.	U.G.					
1" B.S.F	W.G.					

SIZE	TYPE	W	X	Y	Z	F
6 BA	A.H.	·500	·190	·680	·260	065
4 BA	B.H.	·700	·240	940	375	096
2 BA	C.H.	·700	·330	·940	·375	·096
7/32" B.S.F	D.H.					
1/4" B.S.F	E.H	1·00	·380	1·24	·500	·096
9/32" B.S.F	F.H	1·00	·420	1·24	·560	096
5/16" B.S.F	G.H.	1·10	·460	1·35	·600	096
3/8" B.S.F	J.H.	1·00	·500	1·31	·625	096
7/16" B.S.F	L.H.	1·20	·670	1·57	·750	·125
1/2" B.S.F	N.H.	1·30	·740	1·67	·875	125
9/16" B.S.F	P.H					
5/8" B.S.F	Q.H					
11/16" B.S.F	R.H					
3/4" B.S.F	S.H					
13/16" B.S.F	T.H					
7/8" B.S.F	U.H					
1" B.S.F.	W.H					





SIZE	TYPE	X	A	B	C	F
6 B.A	A.J.	·130	·260	·470	250	065
4 BA	B.J.	·180	·375	657	·350	·096
2 BA	C.J.	250	·375	·660	·350	·096
7/32" B.S.F	D.J.					
1/4" B S F	E.J.	·260	500	·870	·500	·096
9/32" B.S.F	F.J.	·300	·560	·900	·500	·096
5/16" B.S.F	G J	·350	·600	·975	550	096
3/8" B.S.F.	J.J.	·400	625	·968	·500	·096
7/16" B S F	L.J	540	·750	1·16	·600	·125
1/2" B S F	N.J.	590	·875	1·27	650	·125
9/16" B.S.F	P.J.					
5/8" B.S.F	Q.J.					
11/16" B.S.F	R.J.					
3/4" B.S.F	S.J					
13/16" B.S.F	T.J.					
7/8" B.S.F	U.J.					
1" B.S.F	W.J.					

SIZE	TYPE	X	A	B	C	F
6 BA	A.K.	·180	·260	·470	·250	·065
4 BA	B.K.	·280	·375	·657	·350	·096
2 BA	C.K.	·310	·375	660	350	096
7/32" B.S.F	D.K.					
1/4" B.S.F.	E.K.	420	·500	870	·500	096
9/32" B.S.F	F.K.	·420	·560	·900	500	096
5/16" B.S.F	G.K.	460	·600	·975	550	·096
3/8" B.S.F	J K.	500	625	·968	·500	096
7/16" B.S.F	L.K.	670	·750	1·16	·600	125
1/2" B.S.F.	N K	·740	·875	1·27	·650	·125
9/16" B.S.F	P.K.					
5/8" B.S.F	Q.K					
11/16" B.S.F	R.K.					
3/4" B.S.F	S.K.					
13/16" B.S.F	T.K					
7/8" B.S.F	U.K					
1" B.S.F	W.K					

No	MATERIAL	SPEC
1	MILD STEEL (CADMIUM)	S1
2	STAINLESS STEEL	S80
3	LIGHT ALLOY	DTD 194
4	BRASS	B6 or B13
5	TUN GUM	
6	H.T.S (CADMIUM)	$\frac{S2}{W8}$ S11

IDENTIFICATION MARKS

IN STAINLESS STEEL "SS" STAMPED ON ONE LUG
IN HIGH TENSILE STEEL 'S' STAMPED ON ONE LUG

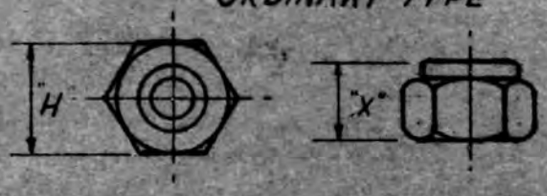
NOTE

WHEN CALLING UP ANCHOR NUTS ON DRAWINGS & SCHEDULES THE DESIGNATION LETTER AND MATERIAL No IS TO BE QUOTED THUS :- E.G.1. DENOTES 1/4" B.S.F DOUBLE ANCHOR NUT IN STEEL

DATE 19-8-42	TITLE :-	SIMMONDS ANCHOR NUTS	ADS 6 TRACED FROM APC 103
DRAWN B J M			
APPROVED	ISSUE No 1		

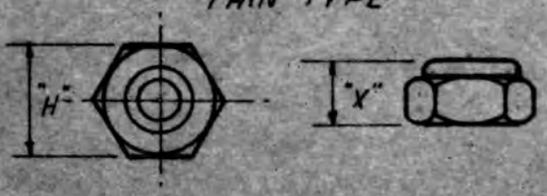
THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

ORDINARY TYPE



SIZE	TYPE	"X"	"H"
6 BA	A.P.	·150	·190/·193
4 BA	B.P.	·210	·245/·248
2 BA	C.P.	·280	·312/·324
7/32 B.S.F.	D.P.	·310	·410/·413
1/4" B.S.F.	E.P.	·330	·440/·445
9/32" B.S.F.	F.P.	·340	·520/·525
5/16" B.S.F.	G.P.	·390	·520/·525
3/8" B.S.F.	J.P.	·470	·595/·600
7/16" B.S.F.	L.P.	·580	·705/·710
1/2" B.S.F.	N.P.	·670	·815/·820
9/16" B.S.F.	P.P.	·740	·915/·920
5/8" B.S.F.	Q.P.	·800	1·002/1·010
11/16" B.S.F.	R.P.	·860	1·092/1·10
3/4" B.S.F.	S.P.	·960	1·192/1·20
13/16" B.S.F.	T.P.	·990	1·192/1·20
7/8" B.S.F.	U.P.	1·020	1·292/1·30
1" B.S.F.	W.P.	1·190	1·468/1·48

THIN TYPE



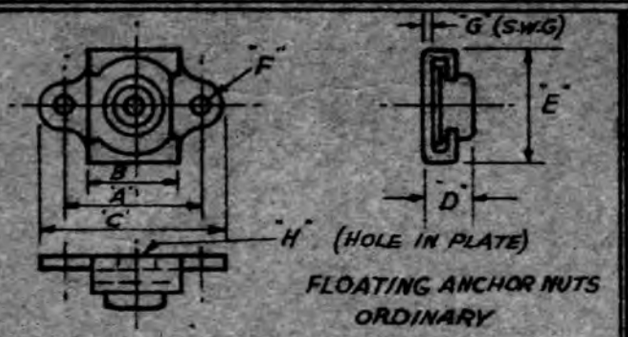
SIZE	TYPE	"X"	"H"
6 BA.	A.T.	·125	·190 / ·193
4 BA.	B.T.	·160	·245 / ·248
2 BA.	C.T.	·220	·321 / ·324
7/32 B.S.F.	D.T.	·240	·410 / ·413
1/4" B.S.F.	E.T.	·230	·440 / ·445
9/32" B.S.F.	F.T.	·270	·520 / ·525
5/16 B.S.F.	G.T.	·300	·520 / ·525
3/8" B.S.F.	J.T.	·350	·595 / ·600
7/16" B.S.F.	L.T.	·500	·705 / ·710
1/2" B.S.F.	N.T.	·520	·815 / ·820
9/16" B.S.F.	P.T.	·570	·915 / ·920
5/8" B.S.F.	Q.T.	·620	1·002 / 1·01
11/16" B.S.F.	R.T.	·650	1·092 / 1·10
3/4" B.S.F.	S.T.	·740	1·192 / 1·20
13/16" B.S.F.	T.T.	·750	1·192 / 1·20
7/8" B.S.F.	U.T.	·770	1·292 / 1·30
1" B.S.F.	W.T.	·900	1·468 / 1·48

No.	MATERIAL	SPEC.
1	MILD STEEL (CADMIUM)	S1
2		
3		
4		
5		
6		

NOTE

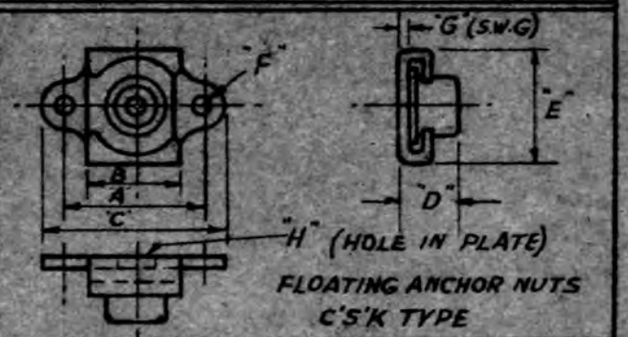
WHEN CALLING UP NUTS ON DRAWINGS & SCHEDULES, THE DESIGNATION LETTER & MATERIAL NUMBER IS TO BE QUOTED THUS:- ET. 1. DENOTES 1/4" B.S.F. THIN NUT IN STEEL.

SIMMONDS HEX. & CLINCH NUTS



FLOATING ANCHOR NUTS ORDINARY

SIZE	TYPE	A	B	C	D	E	F	G	H
6 B.A.	A.L.	·500	·380	·680	·150	·400	·065	·24	·187
4 B.A.	B.L.	·700	·500	·940	·200	·560	·096	·24	·218
2 B.A.	C.L.	·700	·500	·940	·270	·560	·096	·24	·250
7/32 BSF	D.L.								
1/4 BSF	E.L.	1·00	·600	1·280	·290	·750	·096	·22	·328
9/32 BSF	F.L.								
5/16 BSF	G.L.								
3/8 BSF	J.L.								



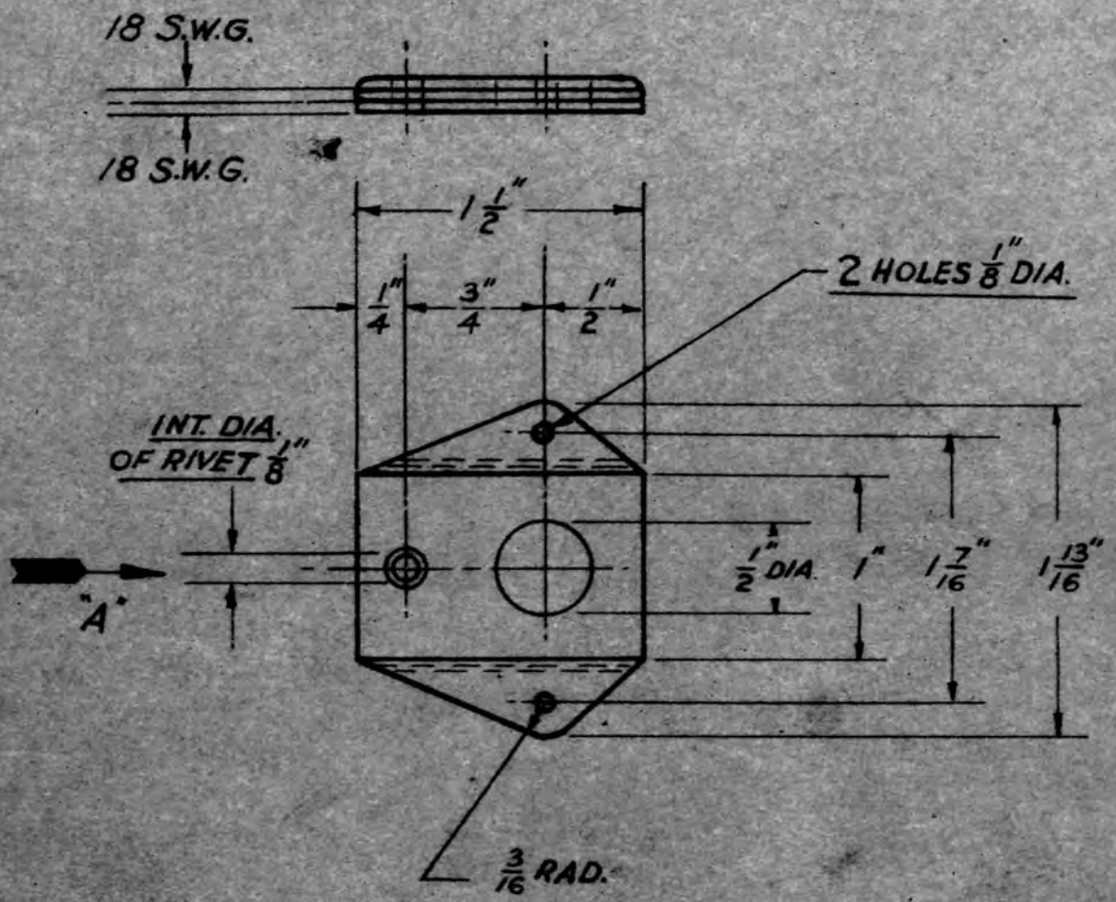
FLOATING ANCHOR NUTS C'S'K TYPE

SIZE	TYPE	A	B	C	D	E	F	G	H
6 B.A.	A.M.	·500	·380	·680	·212	·400	·065	·24	·250
4 B.A.	B.M.	·700	·500	·940	·262	·560	·096	·24	·312
2 B.A.	C.M.	·700	·500	·940	·352	·560	·096	·24	·375
7/32 BSF	D.M.								
1/4 BSF	E.M.	1·00	·600	1·28	·407	·750	·096	·22	·500
9/32 BSF	F.M.								
5/16 BSF	G.M.								
3/8 BSF	J.M.								

DATE. 10-11-42.	TITLE. SIMMONDS NUTS		ADS. 6 B.
DRAWN. T.S. JONES.			
CHECKED.	ISSUE No. 2		COPIED FROM A.P.C.S. 117.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

FIXING DIMENSIONS FOR SIMMONDS P&R TYPE COWLING CLIPS.

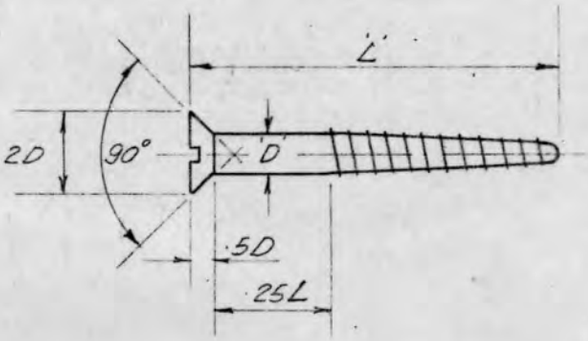


VIEW IN DIRECTION OF ARROW "A"

FROM SIMMONDS DRG: D.S.K. 138.

DATE 10-11-42.	TITLE SIMMONDS CLIPS.	ADS. 6C.
DRAWN T.S. JONES.		
CHECKED	ISSUE No. 2	COPIED FROM A.P.C.S. 117.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



SCREW N°	SCREW DIAM.	DRILL SIZE IN METAL PLATE
1	.072"	5/64" DIA.
2	.085"	3/32" DIA.
3	.098"	7/64" DIA.
4	.111"	1/8" DIA.
5	.124"	N° 29 DRILL (.1360)
6	.137"	N° 27 DRILL (.1440)
7	.150"	5/32" DIA
8	.164"	11/64" DIA
9	.177"	3/16" DIA.
10	.190"	13/64" DIA.
12	.216"	N° 1 DRILL (.2280)

SCREW N°	SCREW DIAM	DRILL SIZE IN METAL PLATE
14	.242"	1/4" DIA
16	.268	9/32" DIA.
18	.294	5/16" DIA
20	.321	"Q" DRILL (.332)
22	.347	23/64" DIA
24	.373	25/64" DIA
26	.400	"Z" DRILL (.413)
28	.426	7/16" DIA
30	.454	15/32" DIA

SEE THE FOLLOWING A.G.S. NOS. FOR LENGTH PART NOS

A.G.S. 250	Brass C'sk.	
A.G.S. 251	M'Steel C'sk.	CAD. PLATED
A.G.S. 893	S'Steel C'sk.	
A.G.S. 252	Brass round head	
A.G.S. 253	M'Steel " "	
A.G.S. 894	S'Steel " "	

DATE 20·8·42	TITLE WOODSCREWS	ADS 7
DRAWN B P M		
APPROVED	ISSUE N° 1	TRACED FROM D/G DHA Sht. 23

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

NOTES.

RIVETS TO THIS A.G.S. SHEET ARE MADE OF ANY OF THE MATERIALS LISTED BELOW.
THE RIVETS ARE TO BE CALLED FOR ON SCHEDULES BY THE A.G.S. NUMBER, THE LETTER INDICATING THE MATERIAL AND A NUMBER WHICH WILL SHOW THE DIAMETER, LENGTH AND TYPE OF HEAD AS GIVEN ON SHEETS 1 & 2. THUS A.G.S. 500-H-49 INDICATES A MILD STEEL SNAP HEAD RIVET 1/8" DIA. X 7/8" LONG.

A LIST IS ALSO GIVEN OF FEATURES BY WHICH THE MATERIAL OF THE RIVET MAY BE INDENTIFIED ON VISUAL EXAMINATION.

THE SULPHURIC ACID ANODISING PROCESS IS NOT TO BE APPLIED TO LIGHT ALLOY RIVETS. [B.C.D & E.] THE ANODIC FILM FOR THESE RIVETS MUST BE DYED THE APPROPRIATE COLOUR MENTIONED IN THE TABLE.

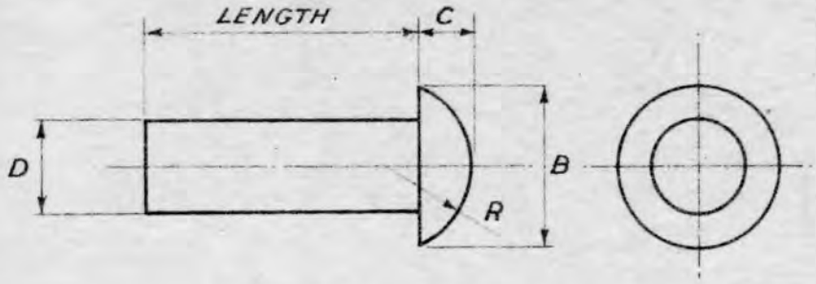
* SPEC^{N} FOR MILD STEEL. THE MATERIAL SHALL BE MILD STEEL, LIMITED TO SULPHUR .05% [MAXIMUM] & PHOSPHORUS .05% [MAXIMUM]. THE WIRE IN THE ANNEALED STATE SHALL GIVE 20/32 TONS PER SQUARE INCH TENSILE & 24/30% ELONGATION ON 8 DIAMETERS. EACH RIVET SHALL BE CAPABLE OF BEING BENT THROUGH AN ANGLE OF 45° OVER A RADIUS EQUAL TO THE DIAMETER OF THE RIVET WITHOUT BREAKING.

LETTER	MATERIAL	MIN. ULT. TENSILE STRENGTH. TONS PER □	SPECIFICATION [LATEST ISSUE]	PROTECTIVE TREATMENT.	INDENTIFICATION
A.	ALUMINIUM.	7	B.S.L-36	ANODIC.	PLAIN FILM.
B.	ALIMINIUM ALLOY.	17	D.T.D. 327	ANODIC.	VIOLET FILM.
	5% MAGNESIUM ALUMINIUM ALLOY.	16	D.T.D. 303		
C.	7% MAGNESIUM ALUMINIUM ALLOY.	20	D.T.D. 198 D.T.D. 182	ANODIC.	RED FILM.
D.	ALUMINIUM ALLOY. [DURALUMIN.]	25	B.S.L. 37	ANODIC.	BLACK FILM.
E.	7% MAGNESIUM ALUMINIUM ALLOY. HARD DRAWN.	27	D.T.D. 404	ANODIC.	GREEN FILM.
F.	STEEL. [NON-CORRODING.]	30	D.T.D. 161.	NONE.	MAGNETIC QUALITY.
H.	MILD STEEL.	20	* AS ABOVE	CADMIUM COATED	MAGNETIC QUALITY.
J.	45% NICKEL ALLOY.	35	D.T.D. 268 D.T.D. 237	CADMIUM COATED	NON MAGNETIC.
K.	HIGH NICKEL COPPER ALLOY.	28	D.T.D. 204	NONE.	NATURAL COLOUR.
	ALUMINIUM NICKEL SILICON BRASS.	28	D.T.D. 367		
L.	COPPER.	14		NONE.	NATURAL COLOUR.

DATE 22.8.42.	TITLE RIVETS [SOLID]	ADS Nº 8A
DRAWN T.S.J.		
CHECKED	ISSUE Nº	TRACED FROM A.G.S. Nº 500

CHKD E.S.M.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



SNAP HEAD RIVETS

DIA. D	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	9/32"	5/16"	11/32"	3/8"
DEPTH OF HEAD C	.04"	.06"	.08"	.09"	.11"	.13"	.15"	.17"	.19"	.21"	.23"
DIA OF HEAD B	.11"	.16"	.22"	.27"	.33"	.38"	.44"	.49"	.55"	.60"	.66
APPROX: RADIUS OF HEAD R	.06"	.09"	.12"	.15"	.18"	.21"	.24"	.26"	.29"	.32"	.35"

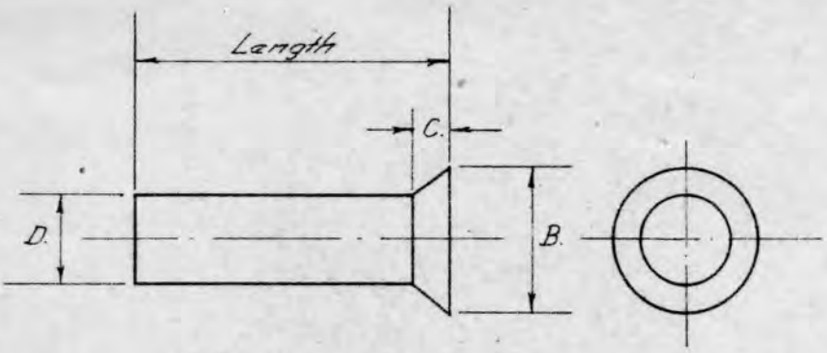
LENGTH	PART NUMBERS										
3/16"	1	21	41	61							
1/4"	2	22	42	62	82						
5/16"	3	23	43	63	83	103	123				
3/8"	4	24	44	64	84	104	124	144	164		
7/16"	5	25	45	65	85	105	125	145	165	185	205
1/2"	6	26	46	66	86	106	126	146	166	186	206
5/8"	7	27	47	67	87	107	127	147	167	187	207
3/4"	8	28	48	68	88	108	128	148	168	188	208
7/8"	9	29	49	69	89	109	129	149	169	189	209
1"	10	30	50	70	90	110	130	150	170	190	210
1 1/4"		31	51	71	91	111	131	151	171	191	211
1 1/2"		32	52	72	92	112	132	152	172	192	212
1 3/4"		33	53		93		133	153	173	193	213
1 7/8"					94						
2"					95		135			195	215
2 1/4"											
2 1/2"											217
2 3/4"											
3"											219

RIVETS A.G.S. 500D (ALL SIZES) SHALL BE QUENCHED FROM A TEMPERATURE OF 490° ± 10° C, IN COLD WATER IMMEDIATELY BEFORE USE.

OTHER NOTES ARE GIVEN ON SHEET 3.

DATE: 22·8·42	TITLE: **RIVETS (SOLID.)**	ADS. 8/B
DRAWN: S.L.		
CHECKED: E.C.M.	ISSUE No.	COPIED FROM: AGS No 500

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



C'SUNK HEAD RIVETS

DIA D.	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	9/32"	5/16"	11/32"	3/8"
DEPTH OF HEAD C	.025"	.037"	.050"	.062"	.075"	.087"	.10"	.112"	.125"	.137"	.150"
DIA OF HEAD B	.10"	.15"	.20"	.25"	.30"	.35"	.40"	.45"	.50"	.55"	.60"
LENGTH	PART NUMBERS										
3/16"	301	321	341								
1/4"	302	322	342	362	382						
5/16"	303	323	343	363	383	403	423				
3/8"	304	324	344	364	384	404	424	444	464		
7/16"	305	325	345	365	385	405	425	445	465	485	505
1/2"	306	326	346	366	386	406	426	446	466	486	506
5/8"	307	327	347	367	387	407	427	447	467	487	507
3/4"	308	328	348	368	388	408	428	448	468	488	508
7/8"	309	329	349	369	389	409	429	449	469	489	509
1"	310	330	350	370	390	410	430	450	470	490	510
1 1/4"				371	391	411	431	451	471	491	511
1 1/2"						412	432	452	472	492	512
1 3/4"							433	453	473	493	513
2"										495	515

Rivets A.G.S. 500D (All sizes) shall be quenched from a temperature of 490° ± 10°C in cold water immediately before use.

Other notes are given on Sheet 3

For 120° Csk. Rivets See D.H.S. 9.

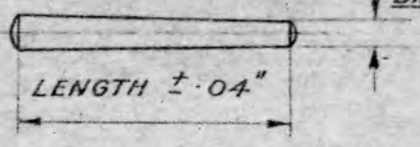
DATE 24.8.42.	TITLE	ADS 8C
DRAWN B.P.M.	RIVETS (SOLID)	
APPROVED	ISSUE No. 1	COPIED FROM A.G.S. No. 500.

CHKD E.C.N.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

TAPER PINS.

TAPER 1 IN 48 = 1°-11½' INCLUDED ANGLE

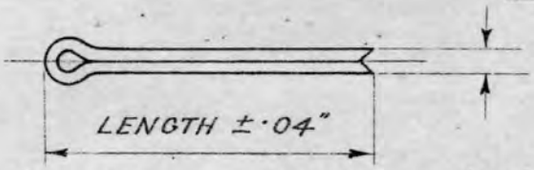


MILD STEEL. S.21 – A.G.S.167.
STAINLESS. S.80 – A.G.S. 859

LENGTH	DIAMETER.							
	1/16"	3/32"	1/8"	5/32"	3/16"	1/4"	5/16"	
	PART NUMBERS							
1/2"	1	11	21	31	41	51	61	
3/4"	2	12	22	32	42	52	62	
1"	3	13	23	33	43	53	63	
1 1/4"	4	14	24	34	44	54	64	
1 1/2"	5	15	25	35	45	55	65	
1 3/4"	6	16	26	36	46	56	66	
2"	7	17	27	37	47	57	67	
2 1/2"	8	18	28	38	48	58	68	
3"	9	19	29	39	49	59	69	
4"	10	20	30	40	50	60	70	

SPLIT PINS.

"A" DIA. +·0" −·005"



MILD STEEL COMM^L A.G.S. 166.
STAINLESS STEEL, D.T.D. 268. A.G.S. 784.

LENGTH	DIAMETER "A"								
	3/64"	1/16"	5/64"	3/32"	7/64"	1/8"	5/32"	3/16"	1/4"
1/2"	1B	1		9					
3/4"	2B	2		10		18	26		
1"	3B	3 *	3A	11	11A	19	27	35	43
1 1/4"		4		12 +		20 Ø	28	36	44
1 1/2"		5	5A	13	13A	21 ø	29	37	45
2"		6		14		22	30	38	46
2 1/2"						23	31	39	47
3"								40	48
DIA. HOLE DRILL.		·07" No 50.		·104" No 37		·136" No 29			

NOTE :-

* FOR NUTS 2B.A. TO 3/8" B.S.F.

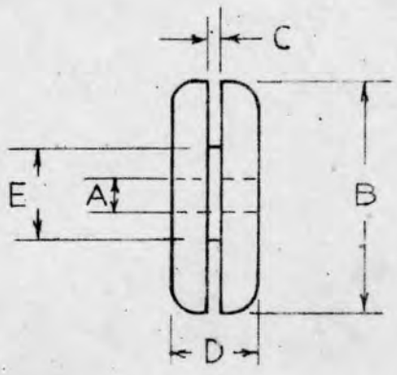
\+ FOR NUTS 7/16" B.S.F. TO 1/2" B.S.F.

Ø FOR NUTS 9/16" B.S.F.

ø FOR NUTS 5/8" B.S.F.

DATE :- 20-8-42	TITLE :- STANDARD TAPER AND SPLIT PINS.	ADS 10.
DRAWN :- S.L.		
CKECKED :-	ISSUE No 1	TRACED FROM APC DATA SH 11

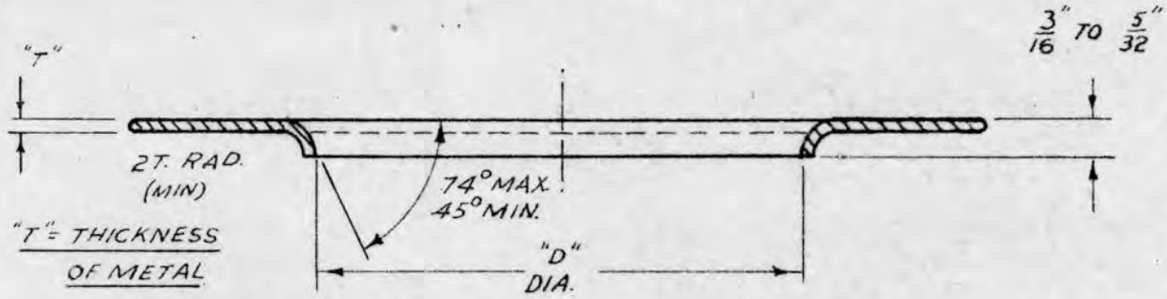
THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



REFERENCE	BORE "A"	OVERALL "B"	GAP "C"	THICKNESS D	DRILL SIZE "E"
CBA 3/16	3/16	1 1/4	1 M.M.	7/16	
CBA 1/4	1/4	1 1/4	1 M.M.	7/16	7/8
CBA 3/8	3/8	1 1/4	1 M.M.	7/16	7/8
CBA 1/2	1/2	1 1/4	1 MM.	7/16	7/8
CBC	5/16	11/16	3/16	7/16	17/32
CBD	1/4	5/8	3/16	7/16	
CBE	3/8	7/8	1/16	5/16	5/8
CBE	7/16	13/16	3/16	3/8	
CBG	11/16	1 1/8	1/16	9/32	
CBH	5/16	17/32	1/16	3/16	
CBI	5/16	11/16	1/16	5/16	15/32
CBJ	3/8	31/32	5/32	17/32	23/32
CBK	3/16	7/16	1/16	3/16	9/32
CBL	9/32	9/16	1/32	1/4	11/32
CBM	1/4	17/32	1/16	3/16	11/32
CBN	7/32	9/16	1/16	5/16	
FORD REF C 166	9/32	1	1/32	7/32	

DATE 25·10·40	TITLE CONNOLLY BUSHES	ADS No 11
DRAWN W.H.W		
APPROVED	ISSUE NO	TRACED FROM

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



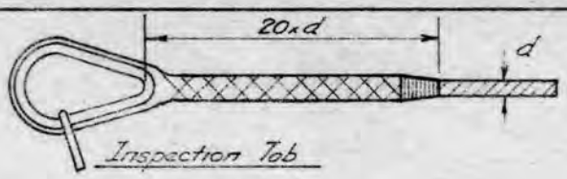
SIZE "D"	DIA OF HOLE IN BLANK	SIZE "D"	DIA OF HOLE IN BLANK	SIZE "D"	DIA OF HOLE IN BLANK
10"	9·775	2¾"	2·525"	1½"	1·275"
8"	7·775	12"	11·775"	1¼"	1·025"
6"	5·775	2⅛"	1·900"	1"	0·775"
5"	4·775	2½"	2·275"	7"	6·775"
4"	3·775	2¼"	2·025"	9"	8·775"
3½"	3·275	2"	1·775"		
3"	2·775	1¾"	1·525"		

ALTERNATIVE METHOD.

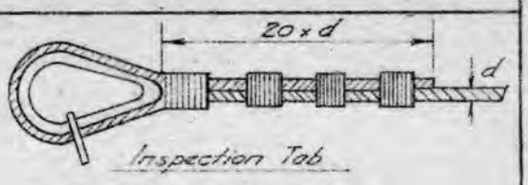
DIE DIA.	"B" DIA.	"A" DIA.	PUNCH DIA.	DEPTH "D"	DIE DIA.	"B" DIA.	"A" DIA.	PUNCH DIA.	DEPTH "D"
1·5"	0·58"	1·14"	1·3"	0·15"	3·8"	2·36"	3·51"	3·60"	0·22"
1·7"	0·71"	1·27"	1·5"	0·15"	4·5"	2·61"	3·78"	3·90"	0·225"
2·0"	0·86"	1·54"	1·7"	0·20"	4·5"	2·86"	4·00"	4·50"	0·23"
2·3"	0·98"	1·72"	1·9"	0·18"	5·5"	3·11"	4·45"	4·70"	0·24"
2·2"	1·11"	1·89"	2·0"	0·18"	6·1"	3·63"	4·90"	5·00"	0·25"
2·5"	1·21"	2·11"	2·3"	0·17"	6·6"	4·14"	5·28"	5·80"	0·25"
2·5"	1·34"	2·16"	2·4"	0·17"	7·5"	4·64"	5·81"	6·20"	0·24"
2·7"	1·46"	2·32"	2·5"	0·17"	8·0"	5·14"	6·34"	6·80"	0·26"
2·7"	1·60"	2·40"	2·5"	0·20"	8·6"	5·66"	6·67"	7·20"	0·27"
3·0"	1·72"	2·58"	2·8"	0·18"	9·0"	6·15"	7·30"	7·80"	0·26"
3·0"	1·77"	2·67"	2·9"	0·20"	9·6"	6·67"	7·90"	8·30"	0·28"
3·2"	1·85"	2·75"	3·0"	0·18"	10·3"	7·15"	8·21"	8·80"	0·29"
3·2"	1·89"	2·83"	3·0"	0·20"	11·1"	7·64"	8·70"	9·30"	0·27"
3·5"	2·11"	3·19"	3·3"	0·22"	11·0"	8·13"	9·30"	9·80"	0·26"

DATE. 27.8.42.	TITLE. STANDARD FLANGED HOLES.	ADS. No 12.
DRAWN. T.S.J.		
CHECKED. E.C.M.	ISSUE No. 1	COPIED FROM. DATA SHEET No. 12.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



STANDARD SPLICE FOR EXTRA FLEXIBLE ROPES



STANDARD JOINT FOR STRAINING CORD

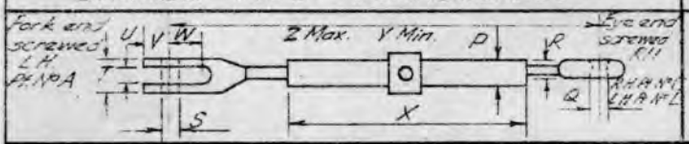
EXTRA FLEXIBLE ROPES SPEC^{N} W2

ITEM	1	2	5	6	3	51	52	53	54	55	56	57	58	59	60
BREAKING LOAD CWTS.	3	5	10	15	20	25	35	45	60	70	80	100	120	140	160
CONSTRUCTION	4×7	4×7	7×14	7×19	7×19	7×19	7×19	7×19	7×19	7×19	7×19	7×19	7×37	7×37	7×37
MAX. DIA. INS.	·06	·08	·12	·15	·16	·18	·21	·24	·27	·28	·31	·34	·40	·42	·44
MAX. WEIGHT LBS, 100 FEET	·63	1·00	2·22	3·75	4·5	5·4	7·0	9·0	11·9	13·2	16·4	19·8	26·2	29·2	32·5

STRAINING CORDS - SPECN. W2

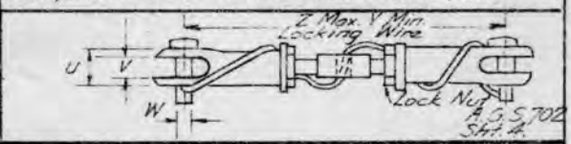
ITEM	41	42	43	44	45	46	47	48	49	71	72	73	74	75	76	77	78	79
BREAKING LOAD CWTS	10	15	20	25	35	45	60	75	90	105	120	135	150	165	180	150	165	180
CONSTRUCTION	1×19	1×19	1×19	1×19	1×37	1×37	1×37	1×37	1×37	1×37	1×37	1×37	7×7	7×7	7×7	1×37	1×37	1×37
MAX. DIA. INS.	09	·11	·13	·14	·17	·20	·22	·25	·27	30	32	·35	40	·41	·44	30	·38	·40
MAX. WEIGHT LBS. 100 FEET	1·7	2·5	3·3	4·1	5·8	7·5	9·9	12·7	15·0	18·5	21·8	24·3	26·6	29·5	33·4	27·0	30·0	32·0

BARREL TYPE TURNBUCKLES



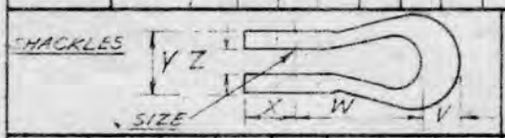
SIZE CWT	PT NO. A.G.S.	Z	Y	Z-Y	X	W	V	U	T	S	R	Q	P
5	490	3·3	2·3	1·0	1·7	·26	·13	·08	·13	5/32	·12	11/64	·25
10	491	6·15	3·95	2·2	3·2	·25	·22	·10	·25	5/32	·17	11/64	28
15E 20L	492	6·75	4·55	2·2	3·5	·32	·30	·15	·33	3/16	·20	7/32	·38
15E 20S	506	4·75	3·55	1·2	2·5	·32	·30	·15	·33	3/16	·20	7/32	·38
25E 35L	493	7·25	5·0	2·2	3·8	·40	·39	·20	·45	1/4	·26	9/32	·47
25E 35L	507	5·2	4·0	1·2	2·8	·40	·39	·20	·45	1/4	·26	9/32	·47
45L	494	7·55	5·35	2·2	4·0	·50	·44	·20	·58	9/32	·32	5/16	·58
45S	508	5·55	4·35	1·2	3·0	·50	·44	·20	·58	9/32	·32	5/16	·58
60	495	7·75	5·5	2·2	4·0	·57	·51	·25	·68	11/32	·36	23/64	·58
70	496	8·0	5·75	2·2	4·0	·57	·54	·25	·73	11/32	·39	23/32	·60
80	497	8·25	6·05	2·2	4·2	·65	·62	·30	·78	13/32	·42	29/64	·67
90	498	8·7	6·4	2·3	4·3	·78	·66	·34	·78	7/16	·46	1/2	72

TENSION ROD TYPE TURNBUCKLES



SIZE CWT	Z	Y	R.H. END X	R.H. END W	R.H. END V	R.H. END U	L.H. END X	L.H. END W	L.H. END V	L.H. END U
5	4·5	3·6	4BA	5/32	·10	·26	4BA	5/32	·10	·26
10	4·65	3·65	2BA	3/16	·15	·33	4BA	5/32	10	26
15	4·85	3·70	2BA	3/16	·15	·33	2BA	3/16	·15	·33
20	5·10	3·93	B.S.F. 7/32	7/32	20	42	2BA	3/16	·15	33
25	5·20	4·00	1/4"	1/4	20	48	B.S.F. 1/4	1/4	20	48
35	5·70	4·4	5/16"	11/32	·25	68	B.S.F. 1/4	1/4	20	48
45	5·90	4·5	5/16"	11/32	25	68	B.S.F. 9/32	9/32	20	58
60 & 70	6·65	5·1	3/8"	11/32	·30	78	B.S.F. 11/32	11/32	25	73
75	6·80	5·2	3/8"	13/32	·30	78	B.S.F. 13/32	13/32	30	78
80	7·10	5·5	13/32"	7/16	·34	78	B.S.F. 13/32	7/16	34	78
90 & 100	7·40	5·7	13/32"	7/16	34	78	B.S.F. 13/32	7/16	34	78
120	8·25	6·47	1/2"	17/32	·40	·98	B.S.F. 13/32 B.S.P.	1/2	38	93

SHACKLES



PT NO S.P.I	SIZE INS.	Z	Y	X	W	V	LOAD LBS
690A	5/32	·10	·23	20	·55	·12	1120
690B	3/16	·15	·34	24	·70	·15	2240
690C	1/4	·20	·45	30	·80	20	3920
690D	9/32	20	·48	33	·90	·22	5040
690E	11/32	25	·55	40	1·05	30	6720
690F	13/32	30	·64	46	1·20	35	8960

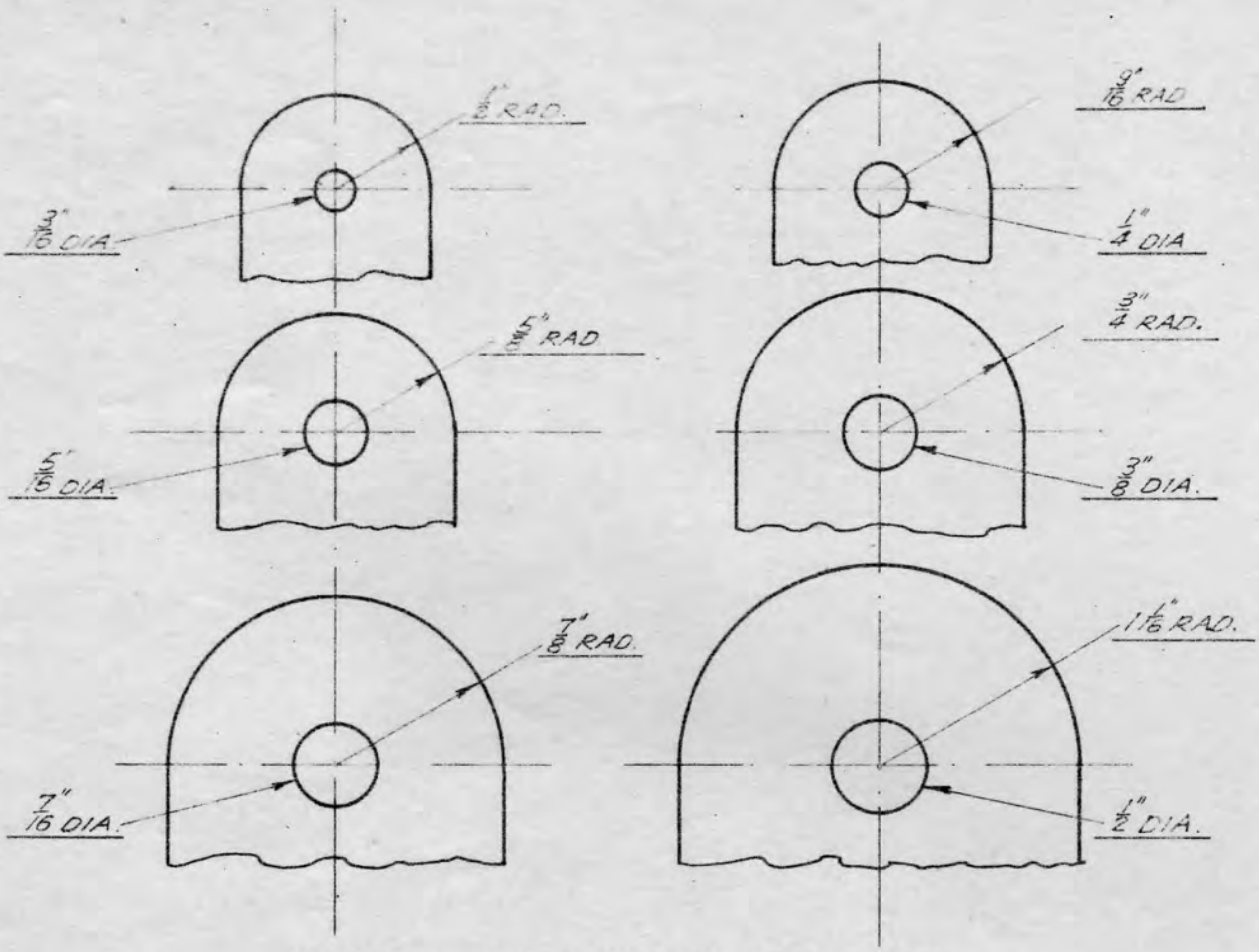
THIMBLES

PT NO AGS 136	Z	Y	SUITABLE FOR FLEX	SUITABLE FOR STRAIN
A	·12	·35	3·5 & 10	10 & 15
B	·17	40	15 & 20	20 25 & 35
C	·21	50	20 25 & 35	45
D	24	60	45	60
E	·27	70	60	75 & 90
F	3	80	70	105
G	·33.	90	80	120

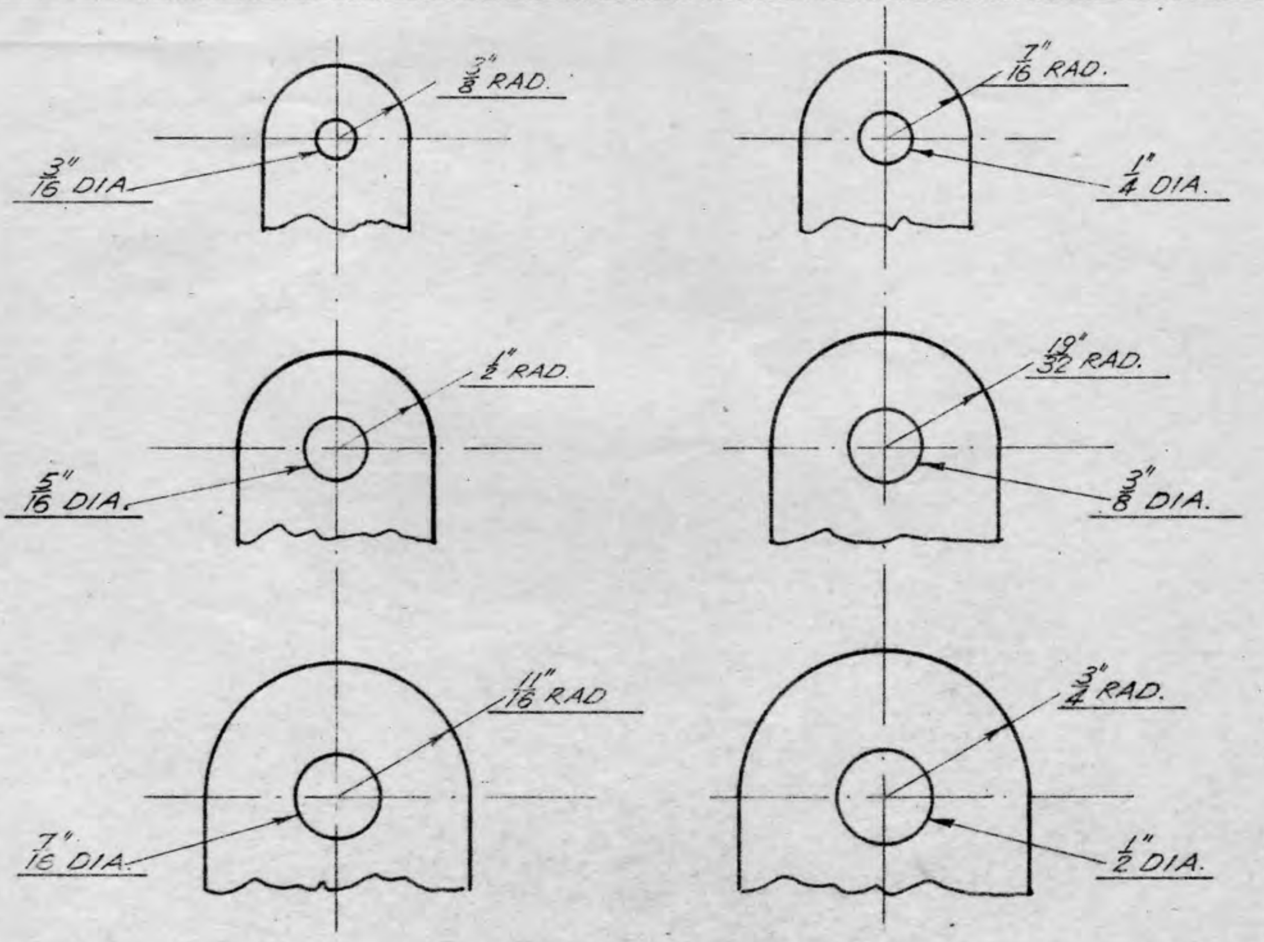
Tension ROD Type Turnbuckle to be used in preference to the barrel type where possible

DATE 22 8 42	TITLE FLEXIBLE CABLE DETAILS	ADS 13
DRAWN B.P.M.		
APPROVED	ISSUE No 1	TRACED FROM D.O. DATA SH. No 16

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



BEARING ON SPRUCE AND PLY



FOR BEARING ON WALNUT, ASH AND OTHER HARDWOODS

DATE 21-8-42	TITLE STANDARD RADII OF WASHER	ADS 14.
DRAWN B.P.M.	PLATES FOR BEARING ON WOOD	
APPROVED	ISSUE No 1.	TRACED FROM P/o Data Sht 22

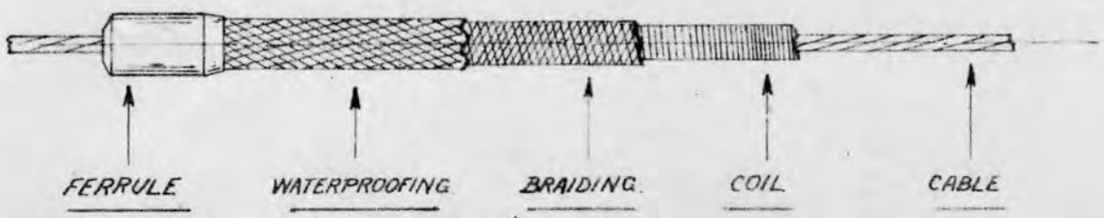
CHKD ECM

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

"BOWDENITE"

CONDUITS AND CORRESPONDING CABLES

CONDUITS B52, B1 & B2 WERE FOMERLY KNOWN AS Nos. 52, 11, & 12 RESPECTIVELY



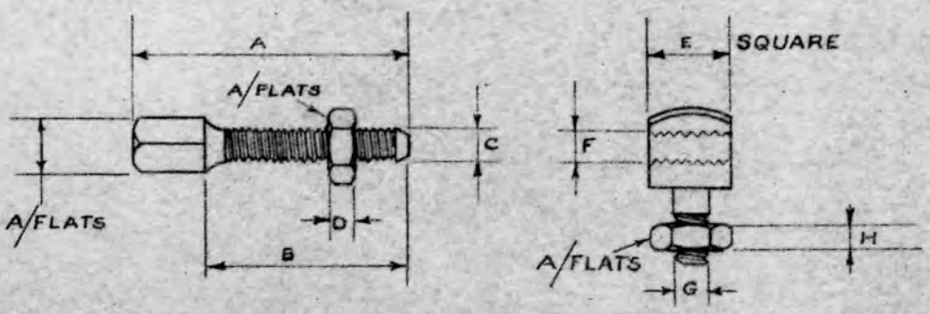
OUTER CONDUIT DIMENSIONS							CABLE DIMENSIONS					
SIZE	EXTERNAL DIA OF FERRULE		NOMINAL DIA O/ALL CONDUIT		NOMINAL BORE OF CONDUIT		TYPE		NOMINAL DIAMETER		Nº OF STRANDS	NOMINAL BREAKING STRAIN-LBS
	INS	M/M	INS	M/M	INS	M/M	NON FRAY	LIVE	INS	M/M		
B626	·125	3·17	·095	2·42	·045	1·14	P7/62	7/62	·020	·508	7	45
B62	·171	4·34	·141	3·58	·045	1·14	P7/62	7/62	·020	·508	7	45
B52	·179	4·54	·156	3·96	·071	1·80	P7/62	7/62	·020	·508	7	45
B52	·179	4·54	·156	3·96	·071	1·80	P7/51	7/51	·036	·915	7	180
B52	·179	4·54	·156	3·96	·071	1·80	P19/52A	19/52A	·045	1·14	19	325
B1H	·218	5·53	·195	5·07	·093	2·38	P19/1	19/1	·062	1·58	19	500
B1H	·218	5·53	·195	5·07	·093	2·38	P19/2	19/2	·075	1·91	19	750
B1	·218	5·53	·188	4·77	·100	2·54	P19/52A	19/52A	·045	1·14	19	325
B1	·218	5·53	·188	4·77	·100	2·54	P19/1	19/1	·062	1·58	19	500
B1	·218	5·53	·188	4·77	·100	2·54	P19/2	19/2	·075	1·91	19	750
B2H	·243	6·18	·212	5·38	·109	2·77	P19/2A	19/2A	·087	2·20	19	1,000
B2	·243	6·18	·212	5·38	·125	3·18	P19/2A	19/2A	·087	2·20	19	1,000
B2	·243	6·18	·212	5·38	·125	3·18	P19/2B	19/2B	·105	2·61	19	1,400
B2	·243	6·18	·212	5·38	·125	3·18	P49/3L	—	·111	2·86	49	1,000
B3H	·265	6·75	·237	6·02	·136	3·45	P49/3L		·111	2·86	49	1,000
B3H	·265	6·75	·237	6·02	·136	3·45	P36/3		·111	2·86	36	1,400
B3	·265	6·75	·237	6·02	·154	3·92	P36/4		·126	3·20	36	1,800
B3	·265	6·75	·237	6·02	·154	3·92	P49/4L		·126	3·20	49	1,625

"Non-fray" cables do not untwist when cut and require no previous soldering.
"Live Lay" cables must be soldered before cutting

FOR ALL SIZES ABOVE B3 USE "BOWDENEX"

DATE 19·8·42	TITLE BOWDENITE	ADS 15
DRAWN L.&B.		
CHECKED E.C.M.	ISSUE 1	TRACED FROM:- "BOWDEN" A1

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



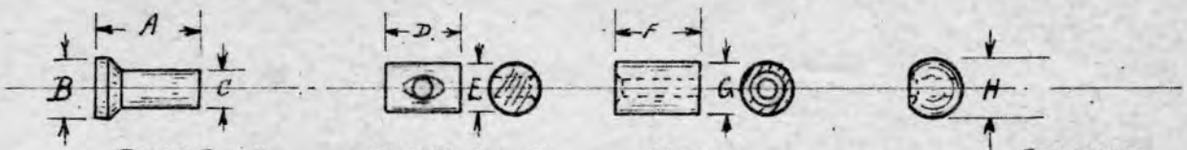
PART NO.	FOR CONDUIT	A/FLATS	A	B	C	D	E	F	G	H	MAT'L	STOCK FINISH
PN1159A	B625	·250	1·062	·750	2BA						BRASS	DULL NICKEL
PN1160		·250			2BA	·125					BRASS	"
PN1161							·250	2BA	3/16X24		STEEL	"
PN551		·338							3/16X24	·156	STEEL	"
PN1159	B62 B52	·250	1·062	·750	2BA						BRASS	"
PN1160		·250			2BA	·125					BRASS	"
PN1161							·250	2BA	3/16X24		STEEL	"
PN551		·338							3/16X24	·156	STEEL	"
PN484	B1 B1H	·312	1·500	1·125	1/4X26						BRASS	"
PN23		·375			1/4X26	·125					BRASS	"
PN999							·375	1/4X26	1/4X26		STEEL	"
PN995		·448							1/4X26	·218	STEEL	"
PN476	B2 B2H	·338	1·500	1·125	1/4X26						BRASS	"
PN23		·375			1/4X26	·125					BRASS	"
PN999							·375	1/4X26	1/4X26		STEEL	"
PN995		·448							1/4X26	·218	STEEL	"
PN4386/2	B3 B3H	·448	1·875	1·437	5/16X22						STEEL	"
PN3223		·625			5/16X22	·218			5/16X22	·218	STEEL	"
PN6433							·437	5/16X22	5/16X22		STEEL	"
PN4386	B2 B2H	·448	1·875	1·437	5/16X22						STEEL	"

ALL SCREW THREADS ARE TO B.E.S.A. STANDARDS

ORDER BY PART NUMBERS

DATE 22-8-42	TITLE 'BOWDEN' PLAIN ADJUSTING STOPS & "T" BARRELS	ADS 16
DRAWN J.K.W.		
CHECKED E.C.M.	ISSUE	TRACED FROM: "BOWDEN" A3

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



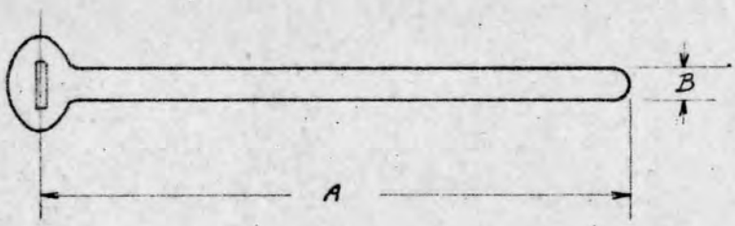
PLAIN-TYPE 9 TRUNION-TYPE 12. TUBULAR SPHERICAL

PART Nº	FOR CABLE	A	B	C	D	E	F	G	H	MAT'L	STOCK FINISH
PN1985A	62						·156	·125		BRASS	MACHINE
PN5546	62								·125	"	"
PN 985	51	·250	·156	·093						"	"
PN 2104	51				·250	·187				"	"
PN 1437	52A	·375	·250	·156						"	"
PN 1408	52A				·156	·250				"	"
PN 2367	52A						·156	·125		"	"
PN 3341A	52A								·171	"	"
PN 84	19/1	·375	·250	·156						"	"
PN 1399	19/1	·312	·218	·148						"	"
PN 1588	19/1				·250	·250				"	"
PN 1919	19/1				·312	·187				"	"
PN 2334	19/1				·248	·281				"	"
PN 3529	19/1				·375	·375				"	"
PN 2788	19/1						·375	·218		"	"
PN 932	19/1						·125	·125		"	"
PN 3341	19/1								·187	"	"
PN 1969	19/1								·250	"	"
PN 1388	19/2	·375	·250	·156						"	"
PN 148	19/2	·312	·218	·148						"	"
PN 2778	19/2				·375	·375				"	"
PN 3558	19/2				·375	·250				"	"
PN 2422	19/2				·248	·281				"	"
PN 533	19/2						·375	·218		"	"
PN 2419	19/2						·312	·187		"	"
PN 993	19/2								·250	"	"
PN 1997	19/2A	·375	·250	·156						"	"
PN 2779	19/2A				·375	·375				"	"
PN 2401	19/2A				·296	·281				"	"
PN 993/1	19/2A								·250	"	"
PN 1300	36/3	·625	·312	·187						"	"
PN 2780	36/3				·375	·375				"	"
PN 2524	36/3						·250	·250		"	"
PN 2536	36/3						·312	·187		"	"
PN 1436	36/4	·625	·375	·250						"	"

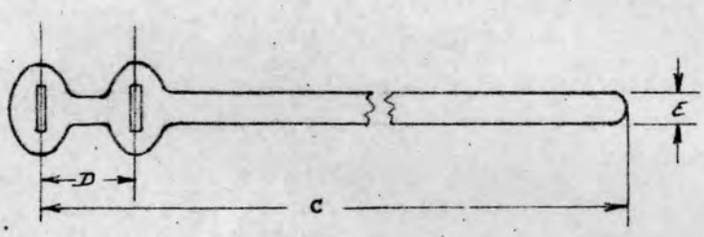
ORDER BY PART Nº

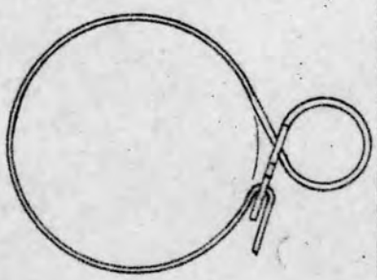
DATE 26-8-42	TITLE 'BOWDEN' NIPPLES FOR SOLDERING.	ADS 17
DRAWN LAB.		
CHECKED ECM	ISSUE Nº 1.	COPIED FROM. BOWDEN - A64A7.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

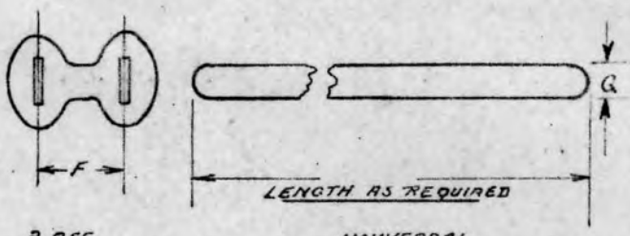


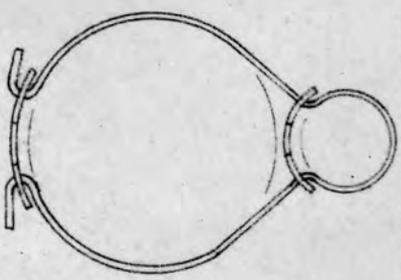
SINGLE





DOUBLE





2 OFF

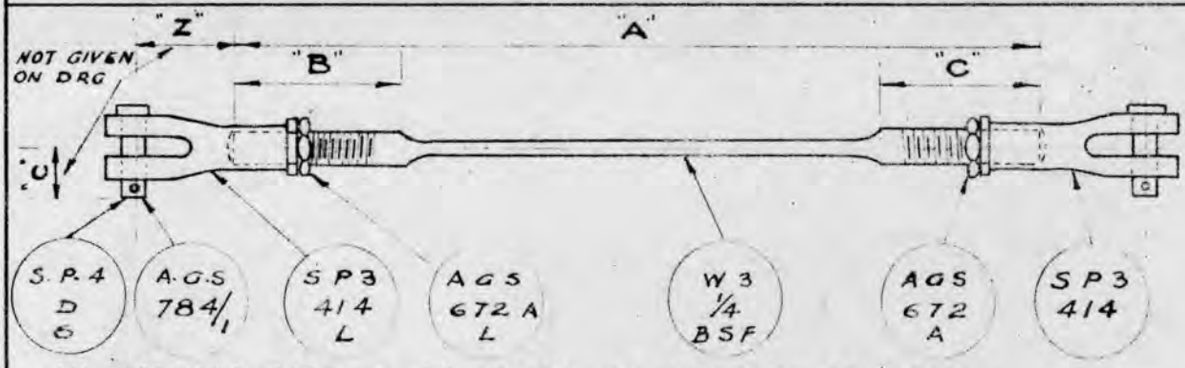
UNIVERSAL

NUMBER	A	B	C	D	E	F	G	MAT'L	FINISH
2963	5 25/32"	13/64"						ALUM.M	SELF OR ANODISE
2606	5 3/8"	15/64"						BRASS	SELF
3360	8 5/16"	1/4"						"	"
3326			3 3/4"	1/2"	15/64"			ALUM.M	SELF OR ANODISE
448			6 13/16"	1/2"	15/64"			"	"
449			6 13/16"	1/2"	15/64"			BRASS	SELF
640						1/2"	1/4"	"	"

SUPPLIED IN SELF FINISH UNLESS OTHERWISE SPECIFIED

DATE 26.5.72	TITLE 'BOWDEN' PLIABLE FRAME OR WIRING CLIPS	ADS 18
DRAWN LAB.		
CHECKED ECM.	ISSUE Nº 1.	COPIED FROM "BOWDEN" C3

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



ALL WIRES AND RODS TO BE SHOWN ON DRAWING AS ABOVE (PARTICULARS GIVEN FOR 1/4" B.S.F. WIRE)
QUOTE 'A' LENGTH TO NEAREST ·5" ABOVE LENGTH REQUIRED
THE LENGTHS OF UNSWAGED ENDS 'B' (L.H) AND 'C' (R.H) ARE GIVEN IN TABLE BELOW AND CORRESPOND TO MINIMUM SPECIFICATION LENGTHS
LENGTH OF PLAIN PORTION ON 'B' AND 'C' IS COVERED BY SPEC: ·5" MAX, ·1" MIN

	SIZE	4 BA	2 BA	1/4 B.S.F	5/16 B.S.F	3/8 B.S.F	7/16 B.S.F	1/2 B.S.F	9/16 B.S.F	5/8 B.S.F	11/16 B.S.F	3/4 B.S.F
	BREAKING LOAD LBS	1050	1900	3450	5700	8500	11800	15500	19300	23630	29610	34520
WIRES	SPECIFICATION	W3	W3	W3	W3	W3	W3	W3	AGS 577 P	AGS 577 Q	AGS 577 R	AGS 577 S
WIRES	AREA	·007	·0126	·0233	·0372	·0561	·0778	·103	·139	·168	·217	·248
WIRES	WIDTH	·192	·256	·348	·440	·540	·636	·732	·860	·970	1·05	1·16
WIRES	THICKNESS	·048	·064	·087	·110	·135	·159	·183	·211	·238	·272	·302
WIRES	B	1·5	1·6	1·8	2·0	2·2	2·4	2·5	2·5	2·8	3·0	3·2
WIRES	C	2·0	1·9	2·2	2·5	2·8	3·1	3·0	3·0	3·3	3·5	3·7
RODS	SPECIFICATION	W8	W8	W8	W8	W8	W8	W8	AGS 579 P	AGS 579 Q	AGS 579 R	AGS 579 S
RODS	AREA	·0085	·013	·023	·039	·059	·084	·112	·140	·171	·221	·252
RODS	SWAGED DIA	·104	·128	·171	·223	·274	·326	·377	·422	·467	·530	·566
RODS	B	1·85	1·9	2·1	2·35	2·5	2·65	2·95	3·0	3·4	3·6	3·9
RODS	C	2·2	2·1	2·4	2·8	2·5	2·9	3·4	3·5	3·9	4·1	4·4

	PART NUMBER ADD "L" FOR L·H	SP3 412	SP3 413	SP3 411	SP3 414	SP3 415	SP3 416	SP3 417	SP3 418	SP3 419	SP3 420	SP3 421	SP3 422	SP7 P	SP7 Q	SP7 R	SP7 S
FORK END JOINTS	PIN DIA	5/32	3/16	7/32	1/4	9/32	11/32	11/32	13/32	7/16	15/32	1/2	17/32	9/16	19/32	5/8	11/16
	y	·10	·15	·20	·20	·20	·25	·25	·30	·34	·36	·38	·40	·281	·313	·35	·375
	x	·275	·345	·435	·495	·595	·695	·745	·795	·795	·845	·945	·995	·715	·765	·845	·915
	w	·20	·25	·28	·31	·35	·38	·40	·45	·55	·59	·63	·65	·61	·68	·74	·80
	v	·30	·325	·38	·40	·50	·575	·575	·65	·78	·82	·91	·97	1·67	1·71	1·69	1·81
	u	1·1	1·3	1·5	1·5	1·7	1·85	1·90	2·1	2·35	2·45	2·60	2·70	2·37	2·50	2·55	2·75
	t	·28	·32	·40	·48	·50	·56	·62	·66	·71	·76	·81	·85	1·00	1·08	1·18	1·26
	S	·375	·495	·575	·625	·735	·875	·915	1·005	1·065	1·155	1·215	1·26	1·2	1·32	1·44	1·54
HEADED PIN SP4	PART NUMBER	A 2	B 3	C 5	D 6	E 8	G 10	G 11	J 12	K 12	L 13	M 15	N 16	P 11	Q 12	R 13	T 15
	CLEARANCE 'C'	·29	·31	·36	·40	·49	·54	·57	·59	·66	·68	·73	·76	·71	·74	·75	·81

SPLIT PIN	1/16 × 1/2 AGS 784/1	3/32 × 3/4 AGS 784/10	1/8 × 1" AGS 784/19	5/32 × 2" AGS 784/30

	PART N° AGS ADD 'L' FOR L·H	673 C	673 B	672 U	672 A	672 B	672 C	672 D	672 E	672 F	672 G	672 I	672 H	672 J	672 K	672 L	672 M
LOCKNUT BRASS	HEX. ACROSS FLATS	·28	·338	·413	·445	·525	·525	·565	·600	·655	·710	·765	·82	·92	1·01	1·1	1·2
	THICKNESS	·09	·11	·12	·13	·13	·15	·15	·16	·16	·18	·18	·20	·20	·22	·24	·26
ADJUSTMENT ONE END ONLY + OR −		·26	·29	·36	·32	·37	·38	·40	·43	·46	·49	·50	·49	·45	·45	·40	·44
Z POSITION OF BRACING MID ADJUSTMENT		·53	·65	·79	·77	·92	1·02	1·04	1·16	1·33	1·40	1·50	1·56	1·36	1·42	1·46	1·56
	SIZE	4 BA	2 BA	7/32 BSF	1/4 BSF	9/32 BSF	5/16 BSF	11/32 BSF	3/8 BSF	13/32 BSF	7/16 BSF	15/32 BSF	1/2 BSF	9/16 BSF	5/8 BSF	11/16 BSF	3/4 BSF

DATE 28·8·42	TITLE. BRACING WIRES AND TIE RODS		ADS 19
DRAWN T.G			
CHECKED O.K	ISSUE N° 1		COPIED FROM: D.O. DATA SHT. 5

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DIA.	AREA ON FULL DIAMR	AREA AT BOTTOM OF THREAD	SINGLE SHEAR (For double shear use twice values given) ON FULL DIAMETER			AT BOTTOM OF THREAD			TENSION AT BOTTOM OF THREAD		
			S1 & S61 25 Tons/□"	S2 & S80 34 Tons/□"	L1 13·5 Tons/□"	S1 & S61 25 Tons/□"	S2 & S80 34 Tons/□"	L1 13·5 Tons/□"	S1 & S61 35 Tons/□"	S2 & S80 55 Tons/□"	L1 25 Tons/□"
6BA	·0095	·0057	500	700	280	320	440	170	450	700	320
4BA	·0159	·0096	900	1200	480	540	740	290	750	1100	530
2BA	·0269	·0170	1500	2000	800	950	1300	500	1320	2000	950
1/4"	·0491	·0316	2700	3700	1500	1800	2400	900	2400	3800	1770
5/16"	·0767	·0503	4300	5800	2300	2800	3800	1500	3900	6200	2800
3/8"	·1105	·0760	6200	8400	3300	4300	5800	2300	5900	9300	4200
7/16"	·1503	·1054	8400	11500	4500	5900	8000	3200	8200	13000	5900
1/2"	·1964	·1385	11000	15000	5900	7800	10500	4200	10800	17000	7700
9/16"	·2485	·1828	13900	19000	7500	10200	14000	5500	14200	22000	10200
5/8"	·3068	·2235	17200	23400	9300	12500	17000	6700	17400	27500	12500
11/16"	·3712	·2790	20800	28300	11200	15600	21000	8400	21800	34200	15600
3/4"	·4418	·3250	24700	33700	13300	18200	25000	9800	25300	40000	18200
13/16"	·5185	·3913	29000	39500	15600	21900	30000	11900	30500	48000	22000
7/8"	·6013	·4520	33700	46000	18100	25300	34000	13700	35200	55500	25000
1"	·7854	·5975	43900	60000	23800	33400	45000	18100	46500	73500	33000
1 1/8"	·9940	·7580	55500	75500	30000	42500	57000	22900	59000	93200	42000

BEARING IN PLATE

NOTE:- Figures to the right of heavy lines are constant and are the single shear values of bolts

MATERIAL	DIA.	SWG OF PLATE = FULL DIAMETER 24	22	20	18	17	16	14	12	10	8
S1 BOLTS IN M.S. PLATE S3 BEARING STRESS 40 TONS/IN²	4BA	280	300	450	610	650	900	900	900	900	900
	2BA	370	460	590	720	930	1060	1320	1500	1500	1500
	1/4"	490	630	810	1080	1260	1440	1800	2340	2700	2700
	5/16"	610	780	1010	1350	1570	1800	2250	2920	3600	3870
	3/8"	730	940	1210	1620	1890	2160	2700	3500	4300	5400
	7/16"	860	1100	1410	1900	2200	2520	3150	4100	5000	6300
	1/2"	980	1260	1620	2160	2520	2880	3600	4700	5700	7200
	5/8"	1230	1570	2020	2700	3150	3600	4500	5800	7200	9000
	3/4"	1470	1890	2430	3240	3780	4300	5400	7000	8600	10800
	7/8"	1630	2200	2830	3780	4400	5000	6300	8200	10200	12600
	1"	1980	2500	3260	4300	5000	5700	7200	9300	11500	14400
S1 BOLTS IN DURAL L3 OR ALCLAD L38 BEARING STRESS 31 TONS/IN²	4BA	210	270	350	460	550	630	790	900	900	900
	2BA	250	350	450	610	700	820	1030	1340	1500	1500
	1/4"	380	480	680	830	970	1110	1390	1800	2170	2700
	5/16"	470	600	770	1030	1220	1390	1730	2250	2740	3460
	3/8"	570	720	930	1240	1450	1670	2070	2700	3280	4150
	7/16"	660	850	1090	1450	1700	1950	2440	3160	3830	4850
	1/2"	750	970	1240	1660	1940	2230	2780	3600	4350	5550
	5/8"	950	1210	1550	2070	2430	2780	3470	4500	5500	6950
	3/4"	1140	1450	1860	2500	2900	3340	4150	5400	6500	8300
	7/8"	1300	1710	2180	2900	3300	3900	4860	6300	7650	9600
	1"	1520	1950	2480	3300	3800	4450	5500	7150	8700	11100

DATE 25·8·42	TITLE STRENGTH OF BOLTS	ADS 20
DRAWN B.P.M.		
CHECKED C.N.	ISSUE No. 1	COPIED FROM Data Sht. No 9

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

B.S.F.				WHIT STANDARD.				BRITISH ASSOCIATION.					WHERE USED.	STANDARD HEX.			
SIZE	T.P.I.	CORE AREA	CORE DIA.	DIA.	T.P.I.	CORE AREA	CORE DIA.	NO	DIA.	PITCH	CORE AREA	CORE DIA.	WHIT.	B.A. B.S.F	CORNERS APPROX	FLATS MIN.	FLATS MAX.
7/32				1/16	60		0412	0	·2362	·0394	·0279	·189		6BA	·223		·193
1/4	26	·0316	·2007	3/32	48		·0670	1	·2087	·0354	·0216	·166		4BA	·286		·248
9/32	26	·0423	·232	1/8	40	·0068	·0930	2	·1850	·0319	·0169	·147		3BA	·325		·282
5/16	22	·0508	·2543	5/32	32	·0099	1162	3	·1614	·0287	·0127	·127		2BA	·374		·324
11/32	22	·0638	·2851	3/16	24	·0141	·1362	4	·1417	·0260	·0097	·111		1BA	·421		365
3/8	20	·076	·3110	7/32	24	·0215	·1653	5	·1260	·0232	·0075	·098		0 7/32	·478		·413
13/32	20	·092	·338	1/4	20	·0272	·186	6	·1102	·0209	·0057	·085		1/4	·515		·445
7/16	18	·1054	·3664	5/16	18	·0456	·2414	7	·0984	·0189	·0045	·076	1/4	9/32 5/16	·610		·525
15/32	18	·124	·397	3/8	16	·068	·2950	8	·0866	·0169	·0034	·066		3/8	·690		·600
1/2	16	·1385	·42	7/16	14	·094	·346	9	·0748	·0154	·0025	·056	3/8	7/16	·820		·710
9/16	16	·1828	·4825	1/2	12	·121	·3933	10	·0669	·0138	·0019	·050		1/2	·950		·820
5/8	14	·2235	·5335	9/16	12	·1632	·4558						1/2	9/16	1.06		·920
11/16	14	·279	·5960	5/8	11	·204	·5086						5/8	5/8	1.17		1.010
3/4	12	·325	·6433	11/16	11	·304	·5711							11/16	1.27		1.100
13/16	12	·3913	·7058	3/4	10	·304	·6219	B.S.P.						3/4 13/16	1.39		1.200
7/8	11	·4520	·7586	13/16	10		·6844	SIZE	DIA.	T.P.I.	CORE AREA	CORE DIA.	3/4	7/8	1.51		1.300
15/16	11	·5295	·821	7/8	9	·422	·7327	1/8	·383	28	·0892	·337		15/16	1.61		1.390
1	10	·5971	·8719	15/16	9		·7952	1/4	·518	19	·1597	·451	7/8	1	1.71		1.480
1 1/16	10		·9344	1	8	·555	·8399	3/8	·656	19	·2722	·589	1	1 1/8	1.95		1.670
1 1/8	9	·7585	·9827	1 1/16	8		·9024	1/2	·825	14	·4231	·734	1 1/8	1 1/4	2.15		1.860
13/16	9		1.045	1 1/8	7	·6969	·9420	5/8	·902	14	·5162	·811	1 1/4	1 3/8	2.38		2.050
1 1/4	9	·9637	1.108	1 3/16	7		1.0045	3/4	1.041	14	·7083	·950	1 3/8	1 1/2	2.57		2.220
15/16	9		1.1702	1 1/4	7	·8942	1.0670	7/8	1.189	14	·9464	1.098	1 1/2	1 5/8	2.80		2.410
1 3/8	8	1.1593	1.215	1 5/16	7		1.1295	1	1.309	11	1.117	1.193	1 5/8	1 3/4	2.98		2.580
17/16	8		1.2774	1 3/8	6	1.0597	1.1616	1 1/4	1.650	11	1.848	1.534	1 3/4	2	3.185		2.760
1 1/2	8	1.4100	1.3399	1 7/16	6		1.2241	1 1/2	1.882	11	2.4775	1.766	2		3.64		3.150
1 9/16	8		1.4024	1 1/2	6	1.3001	1.2866	1 3/4	2.116	11	3.1416	2.000	2 1/8		3.86		3.340
1 5/8	8	1.6854	1.4649	1 9/16	6		1.3491	2	2.347	11	3.907	2.231	2 1/4		4.1		3.550
1 11/16	8		1.5274	1 5/8	5	1.4718	1.3689	2 1/4	2.587	11	4.79	2.471	2 3/8		4.34		3.750
1 3/4	7	1.9285	1.5670	1 11/16	5		1.4314	2 1/2	2.960	11	6.34	2.844	2 1/2		4.5		3.890
1 13/16	7		1.6295	1 3/4	5	1.7528	1.4939	2 3/4	3.210	11	7.50	3.094	3		5.22		4.530
1 7/8	7	2.2485	1.6920	1 13/16	5		1.5564	3	3.460	11	8.76	3.344					
1 15/16	7		1.7545	1 7/8	4 1/2	1.986	1.5904	3 1/4	3.700	11	10.06	3.584					
2	7	2.5930	1.8170	1 5/16	4 1/2		1.6529	3 1/2	3.950	11	11.52	3.834					
2 1/8	7	2.9620	1.9420	2	4 1/2	2.311	1.7154	3 3/4	4.200	11	13.07	4.084					
2 1/4	6	3.2576	2.0366	2 1/8	4 1/2		1.8404	4	4.450	11	14.72	4.334					
2 3/8	6	3.6698	2.1616	2 1/4	4	2.9249	1.9298	4 1/2	4.950	11	18.30	4.834					
2 1/2	6	4.1065	2.2866	2 3/8	4		2.0548	5	5.450	11	22.31	5.334					
2 5/8	6	4.5677	2.4116	2 1/2	4	3.7318	2.1798	5 1/2	5.950	11	27.15	5.834					
2 3/4	6	5.0535	2.5366	2 5/8	4		2.3048	6	6.450	11	31.47	6.334					
2 7/8	6	5.5639	2.6616	2 3/4	3 1/2	4.4641	2.3841										
3	5	5.9133	2.7439	2 7/8	3 1/2		2.5091										
3 1/8	5		2.8689	3	3 1/2	5.4496	2.634										
3 1/4	5		2.9939	3 1/8	3 1/2		2.759										
3 3/8	5		3.1189	3 1/4	3 1/4	6.406	2.856										
3 1/2	4 1/2		3.2154	3 3/8	3 1/4		2.9810										
3 5/8	4 1/2		3.3404	3 1/2	3 1/4	7.5769	3.1060										
3 3/4	4 1/2		3.4654	3 5/8	3 1/4		3.2310										
3 7/8	4 1/2		3.5904	3 3/4	3	8.6732	3.3231										
4	4 1/2		3.7154	3 7/8	3		3.4481										
4 1/4	4		3.9298	4	3	10.0272	3.5731										
4 1/2	4		4.18	4 1/4	2 7/8		3.8046										
4 3/4	4		4.43	4 1/2	2 7/8	12.9118	4.1546										
5	4		4.68	4 3/4	2 3/4		4.2843										
5 1/4	3 1/2		4.88	5	2 3/4	16.1477	4.5343										
5 1/2	3 1/2		5.134	5 1/4	2 5/8		4.7621										
5 3/4	3 1/2		5.384	5 1/2	2 5/8	19.7301	5.0121										
6	3 1/2		5.634	5 3/4	2 1/2		52377										
				6	2 1/2	23.652	5.4877										

TOLERANCE VARIES WITH MATERIAL.

DATE 28·8·42.

DRAWN T.S.J.

CHECKED

TITLE. **STANDARD SCREW THREADS.**

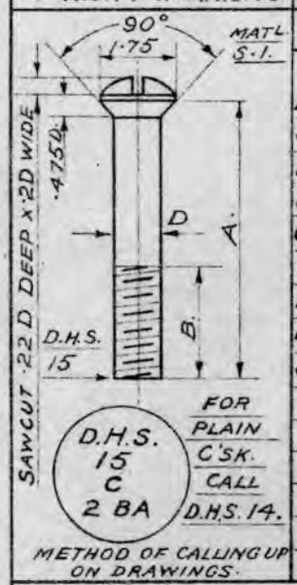
ISSUE No. 1 2

ADS. 21.

TRACED FROM DATA SHEET No. 8

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

C'SK. HEAD BOLTS D.H.S.14 & D.H.S.15

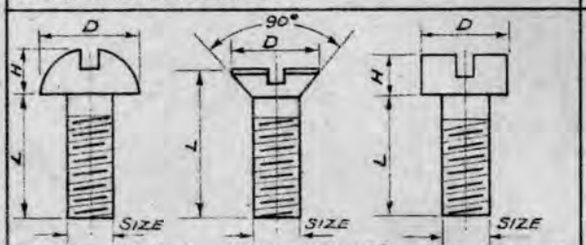


D.H.S. 15 C 2 BA — FOR PLAIN C'SK. CALL D.H.S. 14.

METHOD OF CALLING UP ON DRAWINGS.

MK.	A.	B.	MK	A.	B.	MK	A.	B.	MK	A.	B.	MK	A.	B.	MK	A.	B.	MK	A.	B.
	4 BA			2 BA			¼" BSF			5/16" BSF			⅜" BSF			7/16" BSF			½" BSF	
	INS.	INS.		INS.	INS.		INS.	INS.		INS.	INS.		INS.	INS.		INS.	INS.		INS.	INS.
B	·4	·35	B	·4	·35	B	·4	·35	B	·4	·35	C	·6	·55	D	·8	·70	D	·8	·75
C	·6	·50	C	·5	·50	C	·6	·55	C	·6	·60	D	·8	·65	E	1·0	·70	E	1·0	·75
D	·8	·50	D	·8	·50	D	·8	·55	D	·8	·60	E	1·0	·65	G	1·4	·90	G	1·4	1·00
E	1·0	·50	E	1·0	·50	E	1·0	·55	E	1·0	·60	G	1·4	·85	I	1·8	·90	I	1·8	1·00
G	1·4	·70	G	1·4	·70	G	1·4	·75	G	1·4	·80	I	1·6	·85	K	2·2	·90	K	2·2	1·00
I	1·8	·70	I	1·8	·70	I	1·8	·75	I	1·8	·80	K	2·2	·85	M	2·6	·90	M	2·6	1·00
K	2·2	·70	K	2·2	·70	K	2·2	·75	K	2·2	·80	M	2·6	·85	O	3·0	·90	O	3·0	1·00
M	2·6	·70	M	2·6	·70	M	2·8	·75	M	2·6	·80	O	3·0	·85	Q	3·5	1·05	Q	3·5	1·10
O	3·0	·70	O	3·0	·70	O	3·0	75	O	3·0	·80	Q	3·5	·95	S	4·0	1·05	S	4·0	1·10
			Q	3·5	·80	Q	3·5	·80	Q	3·5	·90	S	4·0	·95	U	4·5	1·05	U	4·5	1·10
			S	4·0	·80	S	4·0	·80	S	4·0	·90	U	4·5	·95	W	5·0	1·05	W	5·0	1·10
			U	4·5	·80	U	4·5	·80	U	4·5	·90	W	5·0	·95	X	5·5	1·05	X	5·5	1·10
			W	5·0	·80	W	5·0	·80	W	5·0	·90	X	5·5	1·00	Y	6·0	1·05	Y	6·0	1·10
			X	5·5	1·00	X	5·5	1·00	X	5·5	1·00	Y	6·0	1·00						
			Y	6·0	1·00	Y	6·0	1·00	Y	6·0	1·00									

METAL SCREWS.



BRASS – AGS 244 / M.S. – AGS 245 — BRASS – AGS 248 / M.S. – AGS 249 — BRASS – AGS 24 / M.S. – AGS 24

METHOD OF CALLING UP ON DRAWING

A.G.S 245/15 2BA.

6 BA	4 BA	2 BA	
D = ·193	D = ·248	D = ·324	
H = ·088	H = ·113	H = ·148	L.
29	20	11	¼"
31	22	13	½"
33	24	15	¾"
35	26	17	1"
36	27	18	1¼"

PARKER DRIVE SCREWS

PARKER KALON TYPE "Z" SCREW IS A HARDENED STEEL SELF TAPPING. SCREW ONLY. TO BE USED IN LIGHTLY LOADED PARTS.

FOR HOLE QUOTE "DRILL No" – FOR P.K. SCREW.

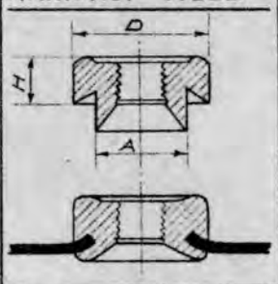
FOR ADDITIONAL SIZES SEE CATALOGUE.

C'SK OR RD HEAD. { No 4 × ¼" – DRILL No 42; No 6 × ⅜" – " " 34; No 8 × ½" – " " 30 }

P.K SCREW RD. HEAD No 6 × ⅜"

METHOD OF CALLING UP ON DRG.

HANK NUT – STEEL



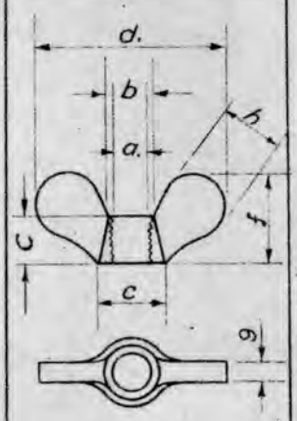
HANK NUT 2BA FOR 18 SWG

METHOD OF CALLING UP ON DRAWING S.W.G. OF PLATE MUST BE QUOTED.

MAY BE USED ONLY ON LIGHTLY LOADED PARTS.

SIZE	A	D	H
4 BA	17/64"	⅜"	·125
2 BA	5/16"	7/16"	·15
¼" B.S.F	⅜"	19/32"	·2

WING NUTS – BRASS



AGS 120 C.

METHOD OF CALLING UP ON DRAWING

PART No	MK	a.	b.	c.	d.	e	f.	g	h.	T.P.I.
AGS. 113	A	6BA	·25	·28	1·0	·187	·50	·062	·344	
"	B	4BA	·25	·28	1·0	·187	·50	·062	·344	
"	C	2BA	·32	·34	1·25	·26	·625	·062	·406	
AGS. 120	A	¼"	·375	·44	1·50	·31	·75	3/32"	·50	26
"	B	9/32"	·437	·52	1·62	·39	·812	3/32"	·562	26
"	C	5/16"	·437	·52	1·62	·39	·812	3/32"	·562	22
"	D	11/32"	·50	·60	1·75	·47	·875	3/32"	·594	22
"	E	⅜"	·50	·60	1·75	·47	·875	3/32"	·594	20
"	F	13/32"	·562	·71	2·0	·55	1·00	⅛"	·687	20
"	G	7/16"	·562	·71	2·0	·55	1·00	⅛"	·687	18
"	H	½"	·625	·82	2·25	·63	1·25	⅛"	·75	16

DATE 2:9:42

DRAWN S.L.

CHECKED E.C.M.

TITLE **STANDARD C'SK. BOLTS, SCREWS, & SPECIAL NUTS.**

ISSUE. No 1

ADS. 22.

COPIED FROM. DATA SHEET No 7.

EXPLANATORY NOTES IN CONNECTION WITH USE OF STRESSES QUOTED IN DATA SHEETS

(1) TENSION

Tensile stresses on sheets 1B - 1F can be used directly without any qualifications. Two values are given, one for civil and one for service aircraft in order that the proof factor is automatically complied with.

(2) COMPRESSION

The .1% proof stress is to be used as the allowable compressive stress when a member is subjected to a compressive load and when strut effect is absent. Strut curves given in the data sheets should be used in design of struts, using the .2% proof stress as the basic compressive stress.

(3) BENDING

(a) Pure Bending

In pure bending the allowable stress is to be taken as half way between .1% proof and the tensile stress.

(b) Bending Combined with tensile end load

When stresses arise from bending accompanied by tensile end load, the permissable stresses to be used are as follows:-

When resultant stress is tensile, the tensile stress given is to be used.

When the resultant stress is compressive, the intermediate stress quoted in 3a above is to be used.

(c) Bending combined with compressive end load

The allowable stress in a member when bending is accompanied with compressive end load neglecting strut effect may be determined approximately as follows:-

$$f = \frac{fb}{fb + fc}\left(\frac{ft - fp}{2}\right) + fp$$

where

f = Allowable Stress.
fb = Stress due to bending.
fc = Stress due to compressive end load.
ft = Allowable tensile stress) As given in
fp = .1% proof) data sheets.

(4) SHEAR

The allowable shear stresses given in the data sheets apply only to solid sections in direct shear and to solid sections subjected to torsion.

Tubes in Torsion

The allowable shear stress in a tube when subjected to torsion depends upon its diameter/thickness, and date sheets No. 33a and 33b must be used to determine the permissible shear stress.

(5) BEARING

The bearing values given in the data sheets can only be realised under ideal conditions i.e., when no vibration is present and when load is unidirectional.

On members subjected to shock load, or to vibratory forces, or to reversal of load such as occur on Undercarriages, Tail Wheels, Engine Mountings, and parts of Control Systems, ONE HALF of the bearing stresses quoted should be taken as the permissible bearing stress.

(6) STABILITY OF BUILT UP PLATE MEMBERS

Structural members (such as ribs, fuselage frames etc.,) are often made up of flanged plate and the permissible stress developed in bending and direct compression depends entirely upon the stability of the flanges, i.e.,

EXPLANATORY NOTES IN CONNECTION WITH USE OF STRESSES QUOTED IN DATA SHEETS.

its ability to resist local buckling. As a general rule, a section would be stable and unlikely to secondary failure if the width of flange divided by the thickness of material equals 5 and in this case the .1% proof can be used as the allowable bending or compressive stress. Where the flange width/thickness exceeds 5, the allowable stress will be reduced. No difinite law can be laid down at the moment giving relationship between allowable stress and flange width and the Stress Office should be consulted in this matter.

The De Havilland Aircraft Co. Ltd., Hatfield, Herts.

Approved...D.B..Adams.....

Date.....12th..Dec..1940.....

DATE 25-8-42	TITLE STRESSES	ADS 23 B.
DRAWN LAB		
CHECKED ECM	ISSUE N° 1	COPIED FROM :- D/O DATA Sheet. 1A

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DATE. 1-9-42
DRAWN. T.S.J
CHECKED. [illegible]

ISSUE No. 1 2 3 4

TITLE. PERMISSIBLE STRESSES:-
SHEET AND STRIP.

ADS. 24.

TRACED FROM. DATA SHEET No 1/B

GROUP	SPEC.N	MATERIAL.	REMARKS.		MAX PERMISSIBLE STRESSES-TONS/IN.² TENSION. SERVICE AIRCRAFT	TENSION. CIVIL AIRCRAFT	.1% PROOF	SHEER.	BEARING	E ×10⁻⁶ LBS/IN.²	N ×10⁻⁶ LBS/IN.²
NON-STAINLESS STEELS.	S.3.	M.S.	LOW TENSILE WELDING STEEL FOR GENERAL USE.	AS RECEIVED.	22	26·4	16·5	18·5	45	29·5	11·5
				AT WELD AFTER HEAT TREATMENT.	20	20	16	14	40	29·5	11·5
	DTD. 124A.	MANGANESE STEEL.	ALL DRAWING SHOULD STATE:- "DTD. 124A. ANNEALED" NORMALISING AFTER WELDING OR BENDING IS NOT REQUIRED. IF FOR VERY SPECIAL DESIGN REASONS A FINISHED PART IS REQUIRED TO BE BROUGHT TO THE "HARDENED & TEMPERED" CONDITION, THE FOLLOWING NOTE MUST BE ADDED TO DRG:- "HARDENED & TEMPERED TO THE REQUIREMENTS OF SECTION III. OF SPEC DTD. 124A." (DO NOT ELECTRICALLY SPOT WELD)	ANNEALED CONDITION (AS PURCHASED & RECEIVED) AFTER WELD.	30	30	25	21	45	28	11·5
				HARDENED & TEMPERED (FOR SPECIAL JOBS ONLY) BEFORE WELD.	42	42	40	29·5	67	28	11·5
	S.88.	H.T.S.	FOR HIGHLY STRESSED PARTS - UNSUITABLE FOR WELDING - PREVIOUSLY DTD. 54A. HARDENED & TEMPERED.		86·5	86·5	65	50	100	29	11·5
	S.84.	LOW CARBON STEEL	SUITABLE FOR EXHAUST BOXES, PIPES & BRACKETS - WELDABLE.		13·3	16	10	11	24	29	11·5
	DHA. 28.	M.S.	ALTERNATIVE TO S.3. TO BE USED FOR LIGHTLY STRESSED DETAILS SUCH AS PIPE CLIPS, BRACKETS FOR ENGINE INSTALLATION DETAILS ETC		14·7	17	11	12	25	29	11·5
STAINLESS STEELS.	DTD. 171A	M.S.	USE GENERALLY FOR LOW STRESSED WELDED PARTS IF REQUIRING GOOD STAINLESS PROPERTIES. NO HEAT TREATMENT REQUIRED AFTER WELDING.		20	24	15	17	36	30	12
	DTD. 166A.	H.T.S.	GOOD STAINLESS PROPERTIES CAN BE WELDED WITHOUT SUBSEQUENT HEAT TREATMENT BUT REDUCES TO DTD. 171 AT WELD (USE UP STOCK OF DTD. 60 - UNWELDABLE).		52	52	40	36	75	25·4	10·2
	S.85.	M.S.	MEDIUM STAINLESS PROPERTIES - PREVIOUSLY DTD. 23B. - CAN BE WELDED TO S.61. - HEAT TREATMENT NECESSARY AFTER WELDING - NOT TO BE USED IN CONTACT WITH DTD. 166, 171 OR 176.		21·3	25·6	16	18	45	30	12
	DTD. 46A.	H.T.S.	STAINLESS ALTERNATIVE TO S.88 - MEDIUM STAINLESS PROPERTIES - UNSUITABLE FOR WELDING - NOT TO BE USED IN CONTACT WITH DTD. 166, 171 OR 176 MAGNETIC.		86·5	86·5	65	50	100	29	11·5
ALUMINIUM ALLOYS.	L.3.	DURALUMIN.	AFTER NORMALISING AND AGE HARDENING.		20	24	15	14·5	32	10·5	3·9
	DTD. 270.	DURAL (G)	AS RECEIVED.		23·3	28	17·5	16·5	36	10·5	3·9
	L.16.	ALUMINIUM.	HALF HARD (FOR HARD SEE SPEC L.4.)		7	7	6·5	4·5	11	9·6	3·6
	DTD. 213	MANGANESE ALUMINIUM.	FOR FAIRINGS ETC. - WELDABLE.		11	11	8	7·5	14	9·6	3·6
	DTD. 390.	ALCLAD.	NO ANODIC TREATMENT NECESSARY.		20	24	15	14·5	32	10	3·9
MISCELLANEOUS.	DTD. 118	MAGNESIUM ALLOY.	"ELEKTRON" SUITABLE FOR WELDING.		9·3	11	7	7	16·5	6	2·2
	DTD. 120A.	MAGNESIUM ALLOY.	"ELEKTRON" UNSUITABLE FOR WELDING.		9·3	11	7	7	16·5	6	2·2
	B.S. 265.	BRASS.	HALF HARD FOR GENERAL USE (SUPERSEDES B.16.) COLD ROLLED SHEET AND STRIP.		14·6	17·5	11	12	26		
	B.S. 899.	COPPER.	HALF HARD. (SUPERSEDES B.15.)		10	12	7·5	8	18		

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DATE. 1.8.42.
DRAWN. T.S.J.
CHECKED. [illegible]

TITLE. PERMISSIBLE STRESSES:- **BAR.**

ISSUE No. 1 2 3 4

ADS.25.

COPIED FROM DATA SHEET No. 1/C.

GROUP	SPEC.N	MATERIAL.	REMARKS.		MAX. PERMISSIBLE STRESSES-TONS/IN.² TENSION. SERVICE AIRCRAFT	TENSION. CIVIL AIRCRAFT	.1% PROOF	SHEER.	BEARING.	E. ×10⁻⁶ LBS/IN.²	N. ×10⁻⁶ LBS/IN.²
NON STAINLESS STEELS.	S.1.	M.S.	ABOVE 3½" DIA. USE S.6. FORGED BAR. UNSUITABLE FOR WELDING.		35	35	27	25	53	28·5	11·5
	S.2.	H.T.S.	ABOVE 2½" DIA. USE S.11. FORGED BAR UNSUITABLE FOR WELDING.		55	55	45·5	34	80	28·5	11·5
	S.14.	M.S.	CARBON CASE HARDENING STEEL.		32	32	24	23	52	29	11·5
	S.21.	M.S.	FOR GENERAL USE ON LOW STRESSED WELDED PARTS. FOR FORGING EQUIVALENT SEE B.S.5005/201.	AS RECEIVED	23	25	17·5	18	35	30	11·5
				AT WELD.	18	20	14	14	30	30	
	DTD. 126A.	M.S.	MEDIUM TENSILE STEEL SUITABLE FOR WELDING.		40	40	31	28	60	28	11·5
	S.67.	CASE HARDENING STEEL.	SUITABLE FOR PARTS SUBJECT TO EXCESSIVE WEAR-THRUST WASHERS ETC.		40	40	30	28	60	28	11·5
STAINLESS STEELS	DTD. 176A.	M.S.	USE GENERALLY FOR LOW STRESSED WELDED PARTS IF REQUIRING GOOD STAINLESS PROPERTIES. NO HEAT TREATMENT REQUIRED AFTER WELDING NON-MAGNETIC.		20	24	15	17	36	28	11·5
	S.61.	M.S.	STAINLESS ALTERNATE TO S.1.-A.1. BOLTS ETC CAN BE WELDED TO S.85. HEAT TREATMENT NECESSARY AFTER WELDING. NOT TO BE USED IN CONTACT WITH DTD. 166. 171. OR 176. MAGNETIC.		27	32	20	23	52	29	11·5
	S.80.	H.T.S.	MEDIUM STAINLESS PROPERTIES, NOT SUITABLE FOR WELDING FOR MATING PARTS. USE S.2. WHERE POSSIBLE MAGNETIC.		55	55	45	34	80	28	11·5
	S.81.	NICKEL CHROME STEEL.	FOR H.T. PINS, CRANKSHAFTS, NOT FOR GENERAL USE MAY BE USED UNDER SPECIAL CIRCUMSTANCES FOR VERY HIGHLY STRESSED PARTS		65	65	55	40	80	28	11·5
ALUMINIUM ALLOYS.	L.1.	DURALUMIN.	UP TO 3" DIA. ALSO EXTRUDED SECTIONS (SEE DTD. 423A. BELOW.)	EXTRUSIONS BELOW ⅜" THICKNESS.	18·6	22·4	14	13·5	30	10·5	3·9
				" ABOVE ⅜" THICKNESS.	20	24	15	14·5	32	10·5	3·9
	L.39.	DURALUMIN.	BETWEEN 3" DIA. & 6" DIA.		16	19	12	11·5	30	10·5	3·9
	L.40.	ALUMINIUM ALLOY.	FORMERLY "HIDUMINIUM" (SEE DTD. 423A. BELOW.)	BAR & EXTRUDED SECTIONS BELOW ⅜" THICKNESS.	26	26	20	16	36	10·5	3·9
				" " ABOVE ⅜" "	27	27	21				
	DTD. 364A.	ALUMINIUM ALLOY.	BARS FOR MACHINING NOT EXCEEDING 3" DIA. FORGINGS, AND EXTRUSIONS ABOVE ⅜" THICKNESS		30	30	26	17	38	10·5	3·9
			" BELOW ⅜" "		28	28	24				
	DTD. 194.	MAGNESIUM ALUMINIUM ALLOY.	M.G.7" RESISTS CORROSION.	UP TO 1" DIA.	20	24	15	14	30	10·2	
				BETWEEN 1" & 3" DIA.	16	19	12	12	27	10·2	
				OVER 3" DIA.	13·3	16	10	10	24	10·2	
	DTD 423A.	ALUMINIUM ALLOY.	USE WHEREVER POSSIBLE AS BAR, EXTRUDED SECTIONS OR FORGINGS IN PLACE OF L.1. AND L.40. NOTE:- BARS OR FORGINGS MUST NOT EXCEED 3" DIA. ON MINOR SECTIONAL DIMENSIONS.		22	22	17	13	29	10·5	3·9
	L.34.	ALUMINIUM.	FOR WELDING PURPOSES.		5	5					
MISCELLANEOUS	B.S. 249	BRASS.	FOR GENERAL USE (SUPERSEDES B.13.)		14·6	17·5	11	10	26	14	5·6
	B.11.	BRASS.	TO BE USED ONLY WHEN SOLDERING AND BRAZING IS REQUIRED.		14·6	17·5	11	13	26	14	5·6
	DTD 78A.	PHOSPHOR BRONZE.	POOR DELIVERY - USE B.S. 249 WHERE POSSIBLE.		20	24	15	17	28	17	6·8

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

ADS. No. 26.

TITLE: PERMISSIBLE STRESSES:— TUBES.

DATE. 3.8.42.
DRAWN. T.S.J.
CHECKED.

ISSUE No. 1 2 3

COPIED FROM DATA SHT. No. 1/D

GROUP	SPEC.N	MATERIAL.	REMARKS.		MAX. PERMISSIBLE STRESSES - TONS/IN.² TENSION. SERVICE AIRCRAFT	TENSION. CIVIL AIRCRAFT	PROOF. 1%	PROOF. 2%	SHEAR	BEARING.	E. x10⁻⁶ LBS/IN.²	N. x10⁻⁶ LBS/IN.²
NON-STAINLESS STEELS	T.1.	M.S.	USE UP STOCK. (T.35 & T.45 FOR FUTURE USE.)		35	35	29	30	25	54	28	11·5
	T.35.	MANGANESE STEEL.	OVAL TUBES AND ROUND TUBES BELOW ½" DIA.	AS RECEIVED.	35	35	30	30	25	54	27·4	11·5
				AT WELD.	30	30	-	25	21	45	27·4	11·5
	T.45.	MANGANESE. STEEL.	ROUND TUBES ½" DIA. AND OVER.	AS RECEIVED.	45	45	40	40	30	67	28·8	11·5
				AT WELD.	30	30	-	25	21	45	28·8	11·5
	T.50	MANGANESE STEEL	CIRCULAR AND NON-CIRCULAR TUBES NOT SUITABLE FOR WELDING.		50	50	445	45	35	75	28·5	11·5
	T.2.	CHROME NICKEL STEEL.	"AXLE TUBE." HARDENED & TEMPERED.		85	85	68	78	50	100	29	11·5
	T.26.	M.S.	FOR EXHAUST PIPES AND LOW STRESSED PARTS. WELDABLE.		15	18	11		11	30	30	11·5
	DTD. 347.	MANGANESE MOLYBDENUM STEEL	SUITABLE FOR WELDING.	BEFORE WELDING.	50	50		45	33	75	29	11·5
	DTD. 347.	MANGANESE MOLYBDENUM STEEL	SUITABLE FOR WELDING.	AFTER WELDING.	45	45		40	30	67	29	11·5
STAINLESS STEELS.	DTD 207.	M.S.	GOOD WELDING AND STAINLESS PROPERTIES. NO SUBSEQUENT HEAT TREATMENT REQUIRED. STRENGTH UNAFFECTED BY WELDING. NON-MAGNETIC.		18·6	22·4	14	16	18	35	27	10·7
	DTD. 211.	M.S.	GOOD STAINLESS PROPERTIES WHEN WELDED REDUCES TO DTD. 207. NO HEAT TREATMENT NECESSARY. SLIGHTLY MAGNETIC.		50	50	37	45	35	75	25·5	10·2
ALUMINIUM ALLOYS.	T.4	DURALUMIN		AS RECEIVED.	24	26	18	19	15·5	34	10·5	3·9
				HEAT TREATED.	20	24	15	17	15	33	10·5	3·9
	T.9.	ALUMINIUM.			8	8	7		5	13	9·6	3·6
	DTD. 220.	ALUMINIUM ALLOY.	PREVIOUSLY "HIDUMINIUM."		27	27	22		16	39	10	3·9
	DTD. 310.	ALUMINIUM ALLOY.	FOR FUEL, OIL AND HYDRAULIC LINES.		10	10						
MISCELLANEOUS	T.7.	COPPER.	ANNEALED.		14	14	10·5		10	23	18	6·9
	BS885.	BRASS.	HARD DRAWN SEAMLESS - FOR GENERAL PURPOSES (SUPERSEDES T.8.)		23·4	25	17·6		15	34	15	6
	BS886.	BRASS.	ANNEALED " - " " " (")		16·8	18	12·5		10	24·5	15	6

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DATE. 4.9.32.
DRAWN. T.S.J.
CHECKED. E.C.W.

ISSUE No. 1

TITLE. PERMISSIBLE STRESSES:—
FORGINGS, CASTINGS, RIVETS, ETC.

COPIED FROM DATA SHEET No. 1/E.

ADS.27.

SPEC.N	MATERIAL.	REMARKS.	MAX. PERMISSIBLE STRESSES - TONS/IN.² TENSION. SERVICE AIRCRAFT.	TENSION. CIVIL AIRCRAFT.	·1% PROOF	SHEAR.	BEARING.	E. ×10⁻⁶ LBS/IN.²	N. ×10⁻⁶ LBS/IN.²
S.6.	M.S.	ALTERNATIVE TO S.1. (CANNOT BE WELDED.)	27	32	20	22	50	28·5	11·5
S.11.	H.T.S.	ALTERNATIVE TO S.2. HEAT TREAT AFTER ROUGH MACHINING.	55	55	43	34	80	28	11·5
S.61.	M.S. STAINLESS.	SEE BAR.	27	32	20	23	52	29	11·5
S.80.	H.T.S. STAINLESS.	SEE BAR.	55	55	45	34	80	28	11·5
L.1.	DURALUMIN.	SEE BAR.	20	24	15	16	32	10·5	3·9
L.40	ALUMINIUM ALLOY.	SEE BAR.	27	27	21	16	36	10·5	3·9
DTD.364.	ALUMINIUM ALLOY.	SEE BAR.	30	30	26	18	40	30	3·9
B.S. 5005/201.	M.S.	FORGING EQUIVALENT OF S.21. BAR. (CAN BE WELDED.)	23	25	17·5	18	35		11·5
DTD. 304.	ALUM-COPPER ALLOY. (HEAT TREATED TWICE)	CLASS I SAND OR DIE CASTINGS FOR MORE IMPORTANT STRESSED PARTS ONLY. GOOD MACHINING PROPERTIES AND SUITABLE FOR THREADED PARTS. TO BE RADIOLOGICALLY EXAMINED. ALSO ANODICALLY TREATED.	18	18	14	12·5	25	8	3·2
DTD. 300	ALUM-MAGNESIUM ALLOY. (HEAT TREATED)	CLASS I SAND OR DIE CASTINGS FOR STRESSED PARTS, MORE RESISTANT TO SHOCK LOADS THAN DTD.304. OR DTD.298. GOOD CORROSION PROPERTIES. TO BE RADIOLOGICALLY EXAMINED. DO NOT ANODISE.	14·6	16	11	10·5	22		
DTD.298	ALUM-COPPER ALLOY. (HEAT TREATED.)	CLASS I SAND OR DIE CASTINGS FOR MOST GENERAL USE TO BE RADIOLOGICALLY EXAMINED, ALSO ANODICALLY TREATED.	14	14	11	9·5	20		
L.5.	ALUM-ZINC-COPPER ALLOY. (NON-HEAT TREATED)	FOR NON-STRESSED PARTS SUCH AS PETROL PIPE ELBOWS, TANK FITTINGS ETC. BETTER THAN L.33. FOR THREADED PARTS. NO RADIOLOGICAL EXAMINATION. DO NOT ANODISE.	4·7	5·6	3·5	4	8		
L.33.	ALUM-SILICON ALLOY (NON-HEAT TREATED)	USES AS FOR SPEC. L.5. BUT NOT SUITED FOR THREADED PARTS. NO RADIOLOGICAL EXAMINATION. DO NOT ANODISE.	4·7	5·6	3·5	4	8		
DTD 289.	MAGNESIUM ALLOY (HEAT TREATED)	KNOWN AS "ELEKTRON A.8." AND "MAGNUMINIUM" ALLOY. USE IN PREFERENCE TO ALUM: ALLOY CASTINGS SPECS, L.5. AND L.33. FOR LIGHTLY STRESSED AND UNSTRESSED PARTS WHEREVER POSSIBLE. RADIOLOGICAL EXAMINATION REQUIRED FOR IMPORTANT CASTINGS ONLY. DO NOT ANODISE. CHROMATE TREATMENT REQUIRED.	6	7·2	4·5	5	10	6·5	2·5
DTD. 59A.	MAGNESIUM ALLOY. (NON-HEAT TREATED)	"ELEKTRON" SAND CASTINGS. COST LESS THAN DTD. 289. SUITABLE FOR LARGE QUANTITIES OF LOW STRESSED PARTS. DO NOT ANODISE. CHROMATE TREATMENT REQUIRED.	5·3	6·5	4	5	9	6	2·5
BS.383.	BRONZE.	GUN METAL. (SUPERSEDES B.2.)	9·3	11·2	7	15	17	12·5	5
B.8.	PHOSPHOR BRONZE.	FOR BEARINGS ETC. SAND CASTINGS.	10	10	7·5	8	15		
S.21.	M.S.	FOR RIVETING NON-STAINLESS STEEL PLATE.	25	25		18	35		
DTD.268.	M.S. STAINLESS.		35	35		25	52		
DTD.327.	ALUMINIUM ALLOY.	NO HEAT TREATMENT REQUIRED.	17	17		10	22		
L.37.	DURALUMIN.	HEAT TREATMENT REQUIRED.	25	25		15	32		
L.36.	ALUMINIUM.		7	7		5	12		
T.26.	M.S.	FOR TUBULAR RIVETS.	15	18		11	30		
T.4.	DURALUMIN.	FOR TUBULAR RIVETS.	20	24		15	33		

MATERIAL.	SPECIFICATION.	TENSION END GRAIN.	COMPRESSION END GRAIN.	CRUSHING ACROSS GRAIN.	SHEAR ALONG GRAIN.	MOD OF RUPTURE.	$E/10^6$	WEIGHT CU. FT.	REMARKS.
SPRUCE GRADE A.	D.T.D. 36B.	10,000	5,000	600	900	8,000	1·5	27 LB.	USE ONLY FOR SPAR FLANGES, WING STRINGERS, TAIL PLANE SPARS ETC. AND SPRUCE PARTS BEING STRESSED UP TO FULL SPEC. STRENGTH.
SPRUCE GRADE B.	"	8,000	4,000	600	800	7,000	1·2	"	GENERAL USE, e.g. BULKHEAD RING & STIFFENERS, SPAR PACKING BLOCKS, LONGERONS IN BALSA FUSELAGE.
SPRUCE GRADE C.	"	—	—	—	—	—	—	—	SHOULD ONLY BE USED FOR MINOR ITEMS SUCH AS PACKING BLOCKS FOR MOUNTING EQUIPMENT ETC.
MAHOGANY.	V. 7		6,250		860	10,000	1·5	33 LB.	
ASH.	V. 4	12,700	5,800		1,500	10,500	1·5	38 LB.	
WALNUT.	V. 5		7,000		1,000	11,500	1·5	39 LB.	
BALSA.			529			1,420		7 to 15 LB.	APPROX. VALUE ONLY.
BIRCH – 3 PLY	V. 3	10,000					1·54	44 LB.	WITH OUTER GRAINS PARALLEL TO LOAD.
"	"	4,000						"	WITH OUTER GRAINS 45° TO LOAD.
"	"	6,500						"	WITH OUTER GRAINS 90° TO LOAD.
"	"				1,800			"	WITH OUTER GRAINS PARALLEL TO LONG AXIS OF MEMBER.
"	"				2,100			"	WITH OUTER GRAINS AT 45° TO LONG AXIS OF MEMBER.
PORT OFFORD CEDAR PLY.	M. 4017							35 LB.	CONSTRUCTION OF PLY TO CONFORM TO SPEC. 4V3. WITH THE EXCEPTION OF PART I PARAGRAPH I.

GLUED JOINTS.

1. SPRUCE TO SPRUCE. THE PERMISSIBLE SHEAR STRESS IN SPRUCE TO SPRUCE GLUED JOINTS DEPENDS UPON THE ANGLE BETWEEN THE GRAINS OF THE PIECES. AVERAGE VALUE FOR GRAIN ANGLES OF 0°, 45° & 90° ARE 800, 375 & 250. LB/IN.^{2} RESPECTIVELY
2. PLY TO SPRUCE. TEST INDICATE THAT THE PERMISSIBLE STRESS IS LESS DEPENDANT UPON RELATIVE GRAIN ANGLES OF CONTACT SURFACES THAN IN SPRUCE TO SPRUCE JOINTS. AVERAGE VALUES FOR GRAIN ANGLES OF 0°, 45° & 90° ARE 800, 650 & 800 LB/IN.^{2} RESPECTIVELY.
3. SPARS – PLY WEBS & SPRUCE FLANGES. IN BEAMS THE PERMISSIBLE SHEAR STRESS ON GLUED AREA BETWEEN WEB AND FLANGE SHOULD NOT EXCEED 250 LB/IN.^{2} (N.A.C.A. REPORT 344.)

PERMISSIBLE TORSIONAL SHEAR STRESS IN SPRUCE.

THE PERMISSIBLE SHEAR STRESS IN TORSION IS APPROXIMATELY 1,000 L.B. IN.^{2} (N.A.C.A. REPORT 354.)

DATE: 7.9.42.
DRAWN: T.S.J.
CHECKED: E.C.M.

ISSUE No. 1

TITLE. PERMISSIBLE STRESSES IN WOOD, 3 PLY & GLUED JOINTS.

ADS. 28.

COPIED FROM DATA SHEET No. 1/F.

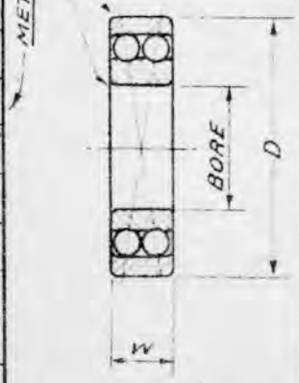
THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

STANDARD ENGINEERING BALL BEARINGS - LIGHT SERIES.

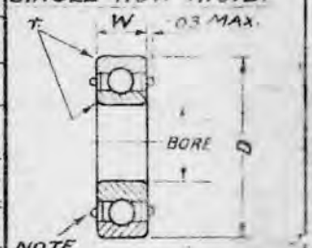
B.E.S.A. MARK INCLUDES BORE DIA.	MANUFACTURERS CODE MK. S.K.F	HOFF	R. & M.	MAX PERMISS. LOAD (FACTORED)	WGT. LBS.	D.	W.	r.	LIMITS SHAFT	LIMITS HOUSING
BAE005	13300	U·105	–	1650	·016	19 M/M	6 M/M	·5 M/M	+·004 −·001	−·000 +·020
BAE008	13303	U·108	NLJ 8	1900	·031	22 M/M	7 M/M	·5 M/M	+·004 −·002	−·000 +·020
BAE009	13304	U. 109	NLJ 9	2750	·047	26 M/M	8 M/M	1 M/M	+·004 −·002	−·000 +·020
BAL010	1200	U. 110	NLJ 10	3750	·060	30 M/M	9 M/M	1 M/M	+·005 −·003	−·000 +·025
BAL012	1201	U·112	NLJ 12	4050	·090	32 M/M	10 M/M	1 M/M	+·005 −·003	−·000 +·025
BAL 1/2	R.L.4	UL S5	NLJ 1/2	4850	·12	1 5/16"	3/8"	1/32"	+·003 −·0000	−·0003 +·0007
BAL 5/8	R.L.5.	ULS 7	NLJ 5/8	6300	·16	1 3/16"	7/8"	1/32"	+·0003 −·0000	−·0003 +·0007
BAL 3/4	R.L. 6	ULS 8	NLJ 3/4	9600	·30	1 7/8"	9/16"	1/16"	+·0003 −·0000	−·0003 +·0007
BAL 7/8	R.L.7	ULS 9	NLJ 1/8	10,000	·30	2"	9/16"	1/16"	+·0003 −·0000	−·0005 +·0007
BAL 1	R.L.8	ULS 10	NLJ 1	12,500	·46	2 1/4"	5/8"	1/16"	+·0003 −·0000	−·0005 +·0007
BAL 1 1/4	R.L.10	ULS 12	NLJ 1 1/4	15,500	·73	2 3/4"	11/16"	1/16"	+·0004 −·0000	−·0005 +·0007
BAL 1 1/2	R.L.12	ULS 13	NLJ 1 1/2	19000	1·18	3 1/4"	3/4"	3/32"	+·0004 −·0000	−·0008 +·0008
BAL 2	R.L.16	ULS 15	NLJ 2	26,000	1·88	4"	13/16"	1/32"	+·0005 −·0001	−·0013 +·0007
BRE 1/4	EE 2	S 1	LNJ 1/4	1220	·02	3/4"	7/32"	1/64"	+·0003 −·0001	−·0003 +·0004
BRE 3/8	E.E.3	S 3	LNJ 3/8	1680	·03	7/8"	7/32"	1/64"	+·0003 −·0001	−·0003 +·0006
BRE 1/2	EE 4	S 5	LNJ 1/2	2400	·05	1 1/8"	1/4"	1/64"	+·0003 −·0000	−·0003 +·0007
BRE 3/4	E.E.6	S 8	LNJ 3/4	4800	·11	1 5/8"	5/16"	1/32"	+·0003 −·0000	−·0003 +·0007
BRE 1	E E.9	5·10	LNJ 1	6,900	·20	2"	3/8"	1/32"	+·0004 −·0000	−·0005 +·0007
BRL 1 1/4	R LS 10	LS 12	LJ 1 1/4	10,800	·72	2 3/4"	11/16"	1/16"	+·0004 −·0000	−·0005 +·0007
BRL 1 1/2	R.LS.12	LS. 13	LJ 1 1/2	13,300	1·03	3 1/4"	3/4"	3/32"	+·0004 −·0000	−·0008 +·0008
BRL 2	RLS 16	LS 14	LJ 1 3/4	18,200	1·68	3 3/4"	13/16"	3/32"	+·0005 −·0001	−·0008 +·0008

DOUBLE ROW SELF ALIGNING.



MAX. MOVEMENT. 9°.

SINGLE ROW RIGID.

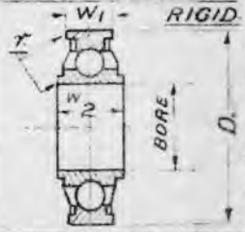


NOTE
GAGE RIVET HEADS PROJECT ON HOFF & REM. RIGID TYPES.

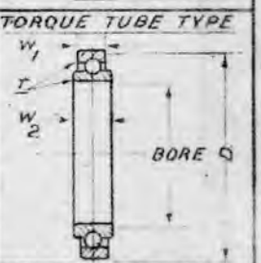
STANDARD AIRCRAFT ENGINEERING BALL BEARINGS.

BORE DIA.	MANUFACTURERS CODE MK. S.K.F.	HOFF	FAFNIR	FACTORED LOAD.	WEIGHT LBS.	D	W_1	W_2	r.	LIMITS SHAFT	LIMITS HOUSING
1/4"	1132628	CS1	*KC4.	2900	·029	3/4"	7/32	5/16"	·03	+·0003 +·0001	−·0003 +·0004
3/8"	1132629	CS3	*KC6.	3300	·033	7/8"	7/32	5/16"	·03"	+·0003 +·0001	−·0003 +·0006
1/2"	1132630	CS5	*KC8.	5500	·047	1 1/8"	1/4	3/8	·04"	+·0003 −·0000	−·0003 +·0007
5/8"	1132631	CS7	–	8500	·078	1 3/8	9/32	13/32	·04	+·0003 −·0001	−·0003 +·0007
1 1/16"	1132358	T 17	A541	7050	·054	1 1/2	1/4	9/32	·015	+·0003 −·0000	−·0003 +·0007
1 5/16"	1132626	T 21	A542	8350	·065	1 3/4	1/4	9/32	·015"	+·0004 −·0000	−·0003 +·0007
1 9/16"	1132246	T 25	A543	9800	·078	2	1/4	9/32"	·015	+·0004 −·0000	−·0005 +·0007
1 13/16"	1132467	T 29	A544	11350	·085	2 1/4	1/4	9/32	·015"	+·0004 −·0000	−·0005 +·0007
2 1/16"	1132405	T 33	A545	13100	·125	2 5/8"	1/4"	9/32	·015	+·0005 −·0001	−·0005 +·0007
2 5/16"	1132627	T 37	A546	14400	·150	2 7/8"	1/4	9/32	·015"	+·0005 −·0001	−·0005 +·0007
SPECIAL TYPES 5/16"	1132498	T	–	3450		7/8"	5/16	5/8	·04"	+·0003 −·0002	−·0003 +·0006
1·895"	1132556	T	*KS3	2650	·047	·777	·27	·297	·02"	+·0005 −·0002	−·0003 +·0004
8 M/M	1132465	N1156	–	1900	·031	22 M/M	7 M/M	8·5 M/M	5 M/M	+·004 M/M −·002 M/M	−·000 M/M +·020 M/M

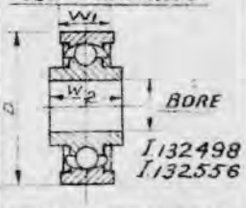
SEALED SINGLE ROW RIGID



TORQUE TUBE TYPE

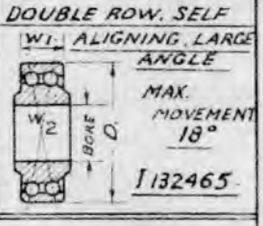


SEALED SINLE ROW SELF ALIGNING



I 132498
I 132556

DOUBLE ROW. SELF ALIGNING. LARGE ANGLE



MAX. MOVEMENT 18°

I 132465

METHOD OF CALLING UP DRG.

BRE 3/8 — IN FUTURE THE B.E.S.A. MARK IS TO BE THE ONLY REF ON DRGS. & SCHEDULE FOR THE STD. ENG. BALL BEARINGS. THIS LEAVES THE BUYING OFFICE FREE TO OBTAIN THE BEST PRICE & DELIVERY.

I 132629 OR C.S.3. — THE SKF MARK WITH THE HOFF AS ALTERNATIVE IS TO BE GIVEN AS SHOWN. FOR THE SPECIAL TYPES GIVEN ONLY THE SKF MARK IS NECESSARY.

NOTE THE ABOVE RANGE OF BALL BEARINGS IS FOR GEN. USE. IN THE FUTURE & SHOULD OBVIATE REFS. TO CATALOGUES, & TO MFRS. DATA THRUST RACES, & SPECIAL BEARINGS ARE TO BE OBTAINED FROM CATALOGUE OF MAKERS APPROVED BY BUYING DEPT. THE LOADS GIVEN ARE MAX. PERM. RADIAL LOADS. FOR MAX. PERM. SIDE LOADS SEE SKF CAT. PAGE 5. * THESE ARE NOT EXACTLY EQUIVALENT BUT HAVE THE SAME BORE & EXTERN. DIAS.

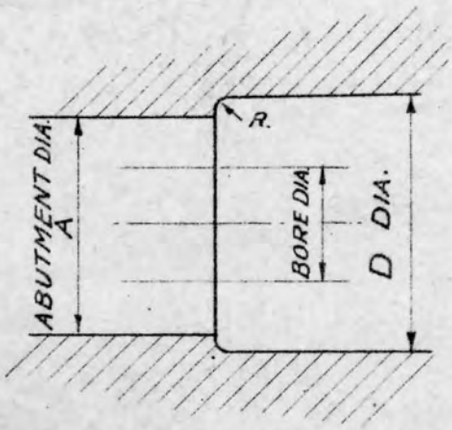
LIMITS:- THE HOUSING LIMITS GIVEN ARE TO BE QUOTED ON DRG. & NO REF NEED BE MADE TO BALL RACE FITTED. THE SHAFT LIMITS ARE TO BE GIVEN ONLY IF INNER RING IS NOT CLAMPED UP OTHERWISE THE EQUIVALENT BOLT SHANK STD. LIMITS ARE SUFFICIENT. (THESE LIMITS ARE RECOMMENDED BY SKF LTD FOR GENERAL USE ON M/C'S

DATE: 31 : 8 : 42	TITLE: **BALL BEARINGS.**	ADS. 29 A.	
DRAWN: S L			
CHECKED: ECM	ISSUE No. 1.	COPIED FROM: DATA SHEET No 14/A	

THE DE HAVILLAND AIRCRAFT PTY. LTD, AUSTRALIA.

STANDARD ABUTMENTS FOR BALL BEARINGS.

BORE DIA.	D	R.	A.
1/4"	3/4"	.03"	5/8"
3/8"	7/8"	.03"	3/4"
1/2"	1 1/8"	.04"	15/16"
5/8"	1 3/8"	.04"	1 3/16"
5/16"	7/8"	.04"	3/4"
	.777"	.02"	5/8"
8 M/M	22 M/M	.5 M/M	3/4"



DATE 31:8:42	TITLE BALL BEARING HOUSING ABUTMENTS.	ADS 29B.
DRAWN S.L.		
CHECKED E.C.M.	ISSUE No 1.	COPIED FROM: DATA SHEET 14/A

THE DE HAVILLAND AIRCRAFT PTY, LTD., AUSTRALIA.

PART No.	SHEET No.	ISSUE No.	DESCRIPTION.
DHS. 1		5	BONDING FLEXIBLES.
DHS. 2	1	5	BONDING FLEXIBLES.
DHS. 3	1	6	BONDING TERMINAL.
DHS. 4	1	14	SPECIAL BOLTS 1/4" B.S.F.
DHS. 4	2	2	SPECIAL BOLTS 1/4" B.S.F.
DHS. 5		8	SPECIAL BOLTS 5/16" B.S.F
DHS. 6		6	SPECIAL BOLTS 3/8 B.S.F.
DHS. 7		1	SPECIAL BOLTS 7/16" B.S.F.
DHS. 8		4	SPECIAL BOLTS 1/2" B.S.F.
DHS. 9		3	120° COUNTERSUNK RIVET.
DHS. 10		3	BRAZIER HEAD RIVETS.
DHS. 11	1	1	INSPECTION STAMP PLATE.
DHS. 12		6	SPECIAL BOLT 2 B.A.
DHS. 13		1	IDENTIFICATION TAB.
DHS. 14	1	4	BOLTS WITH C.S.K. HEADS.
DHS. 15		2	BOLTS WITH RAISED C.S.K. HEADS.
DHS. 16	1	3	TERMINAL.
DHS. 17	1	2	ASSY; OF SPRING CATCH ON JUNCTION BOXES.
DHS. 17	2	3	DETAILS OF SPRING CLIP FOR JUNCTION BOXES.
DHS. 18	1	4	DRAIN WASHER.
DHS. 28	2	5	PIPE CLIPS (SINGLE).
DHS. 29	1	1	PIPE CLIPS (DOUBLE).
DHS. 29	2	3	PIPE CLIPS (DOUBLE).
DHS. 30	1	2	P PIPE CLIPS.
DHS. 30	2	4	P. PIPE CLIPS.
DHS. 31	1	3	TUBULAR CLIPS
DHS. 31	2	2	TUBULAR CLIPS.
DHS. 32	1	1	ANGLE WASHERS.
DHS. 33	1	1	SHRINKAGE WASHERS
DHS. 34		3	STANDARD WASHERS.
DHS. 35	1		STANDARD BLANK SIZES.
DHS. 36	1	4	RUBBER COUPLINGS.
DHS. 37	1	1	UNION PIPE END
DHS. 38	1	4	SPECIAL PINS.
DHS. 38	2	1	SPECIAL PINS.
DHS 39	1	1	WASHER: ALTERNATIVE TO A.G.S. 946.
DHS. 41	1	2	FORK END EYEBOLTS.
DHS. 41	2	1	FORK END EYEBOLTS.
DHS. 42	1	1	FORK END EYEBOLTS.
DHS. 44		3	PLUG ENDS (SCREWED).
DHS. 46		1	BALL RACE HOUSING ADJUSTABLE CONTROL RODS.
DHS. 47	1	1	BONDING FLEXIBLES HEAVY TYPE.
DHS. 48	1	1	BONDING FLEXIBLES HEAVY TYPE.
DHS. 49	1	1	BONDING FLEXIBLES HEAVY TYPE.
DHS. 50	1	1	BONDING FLEXIBLES HEAVY TYPE.
DHS. 50	3	1	INSPECTION DOORS.
DHS. 51	1	1	PROFILE WASHERS.

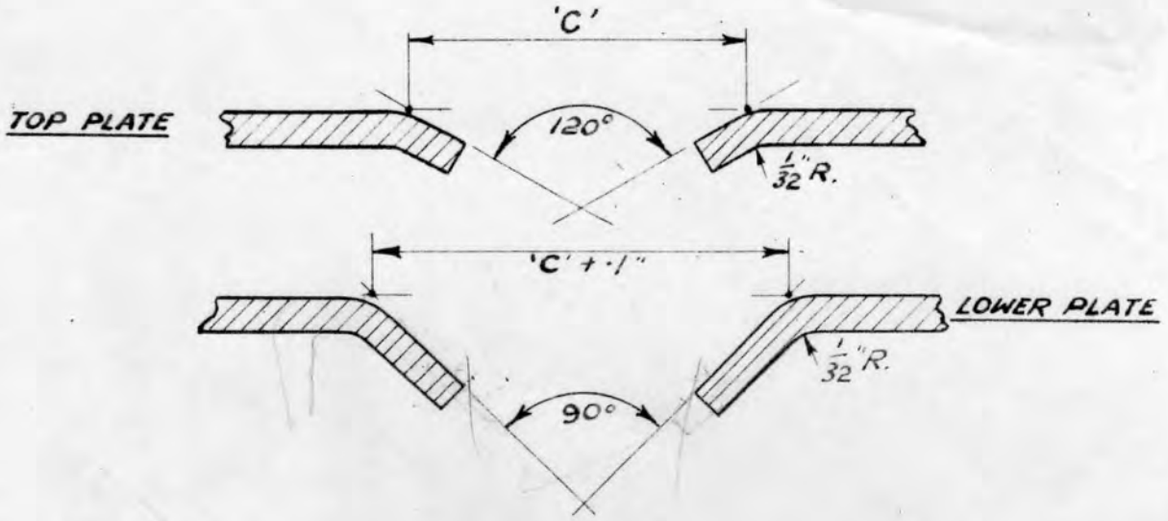
DATE. 11-9-42	TITLE. DHS. INDEX.	ADS. 30A
DRAWN. T.S.J.		
CHECKED.	ISSUE No. 1	TRACED FROM

THE DE HAVILLAND AIRCRAFT PTY, LTD., AUSTRALIA.

PART NO.	SHEET NO.	ISSUE NO.	DESCRIPTION.
DHS. 53	1	2	SMALL PULLEYS AND BOBBINS.
DHS. 54		1	CABLE INSPECTION TABS.
DHS. 55	1	2	GASKETS.
DHS. 58	1	1	PIPE COLLAR.
DHS. 62		1	STAINLESS STEEL TANK BOLTS.
DHS. 63		1	STAINLESS STEEL TANK BOLTS.
DHS. 64	1	3	CLIP.
DHS. 66	1	1	SHIM WASHERS FOR WOODWORK.
DHS. 67	1	1	BRASS SLOTTED NUTS.
DHS. 68	1	1	SHIM.
DHS. 69	1		SHIM.
DHS. 70		1	SPECIAL WASHER.
DHS. 71		4	ATTACHMENT FERRULE FOR PLY-BALSA CONSTRUCTION.
DHS. 73	1	2	BANJO FITTING.
DHS. 74		2	BANJO PILLAR BOLT.
DHS. 75	1	3	ADAPTOR FOUR WAY TYPE.
DHS. 75	2	2	ARRANGEMENT OF MULTI-WAY METAL COUPLINGS. (LIGHT ALLOY.)
DHS. 76	1	3	ADAPTOR PIPE (RANGE OF SIZES) TO FITTING (1/4" B.S.P.).
DHS 77	1	1	PIPE COLLAR FOR METAL COUPLINGS.
DHS. 78	1	2	OUTER SLEEVE FOR METAL COUPLINGS.
DHS. 79	1	2	ADAPTOR PIPE TO FITTING.
DHS. 91-92	1	1	GROUND STEEL PINS.
DHS. 95-6-7	1	4	SPECIAL CUP WASHERS FOR 4 B.S., 2 B.S., 1/4" B.S.F. AND 5/16" B.S.F. C'SK HEAD BOLTS.
DHS. 98	1	1	ATTACHMENT FERRULE FOR PLY-BALSA CONSTRUCTION.
DHS. 99	1	1	WASHER: ALTERNATIVE TO A.G.S. 947.
DHS. 101	1	4	PIPE TO PIPE CONNECTOR.
DHS. 101	2	1	ARRANGEMENT OF METAL COUPLINGS. (LIGHT ALLOY.)
DHS. 101	3	1	ARRANGEMENT OF METAL COUPLINGS. (LIGHT ALLOY.)
DHS. 102	1	2	ADAPTOR PIPE TO FITTING.
DHS. 103	1	1	ATTACHMENT FERRULE FOR PLY-BALSA CONSTRUCTION.

DATE. 11-9-42	TITLE. DHS. INDEX.	ADS.30B.
DRAWN. T.S.J.		
CHECKED.	ISSUE No. 1	TRACED FROM.

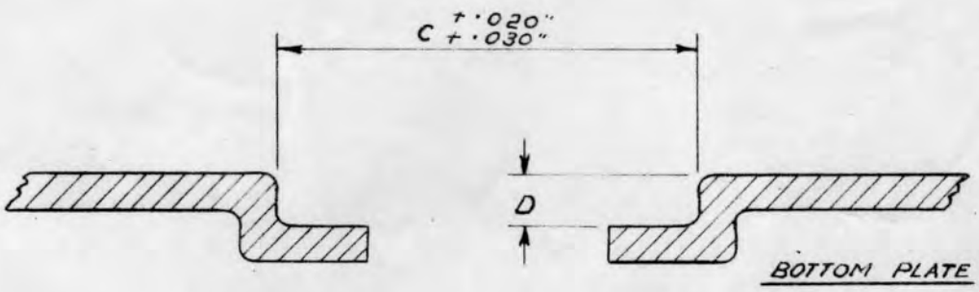
THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.
AIRCRAFT DIVISION



HOLE BEFORE DIMPLING

TOP PLATE 7/16"
LOWER PLATE 13/32"

TYPE OF FASTENER 'F'
SPRING Nº S6-400, S6-425, 1375
DIMENSION 'C' ·84"



HOLE BEFORE DIMPLING	TYPE OF FASTENER	C	D	SPRING PART Nº
5/16"	A	9/16"	·033"	S5-200, 100, S5 225
13/32"	B	11/16"	·040"	S6-250, S6-275, 200

THESE PARTICULARS RELATE TO OLD SYSTEM OF PART NUMBERING.

DATE :- 10-3-43	TITLE :- DIMPLES FOR DZUS FASTENERS	ADS 32 A
DRAWN :- M S.		
CHECKED :-	ISSUE Nº 1 & 3	

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

TYPES A & B

WITH GROMMET

OPERATION 1.
DRILL COWL

TYPE A DRILL $\frac{3}{8}$

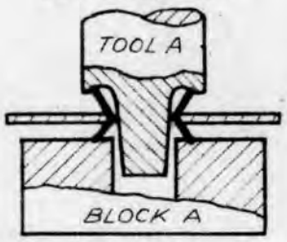
TYPE B DRILL $\frac{1}{2}$

INSERT GROMMET

FOR TYPE A – GROMMET # 375

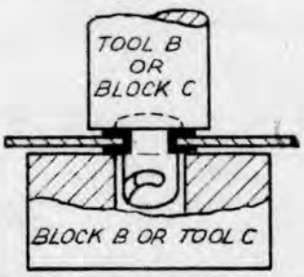
FOR TYPE B – GROMMET # 500

OPERATION 2
SET GROMMET



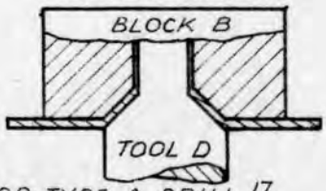
OPERATION 3
INSERT FASTENER

OPERATION 4
CLINCH



WITHOUT GROMMET

OPERATION 1.
DRILL & DIMPLE

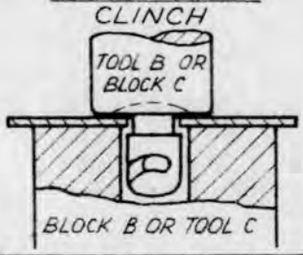


FOR TYPE A DRILL $\frac{17}{64}$

FOR TYPE B DRILL $\frac{23}{64}$

OPERATION 2
INSERT FASTENER

OPERATION 3
CLINCH



DIMPLING COWL SUPPORT

FOR TYPE A DRILL $\frac{5}{16}$

FOR TYPE B DRILL $\frac{13}{32}$

FOR TYPE F DRILL $\frac{7}{16}$

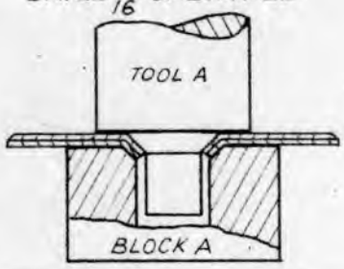
FOR TYPE FA DRILL $\frac{7}{16}$

FOR TYPES A & B USE – BLOCK D & TOOL D

FOR TYPES F & FA USE – BLOCK B & TOOL B

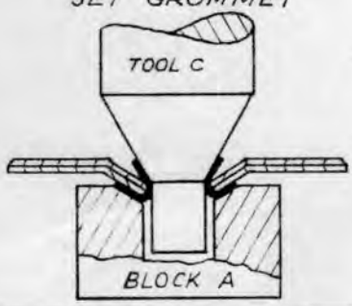
TYPES F & FA

OPERATION 1.
DRILL $\frac{7}{16}$ & DIMPLE

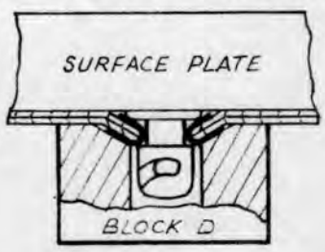


OPERATION 2
INSERT GROMMET

OPERATION 3
SET GROMMET

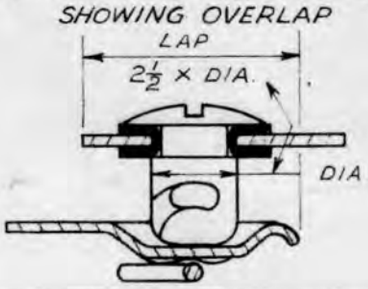


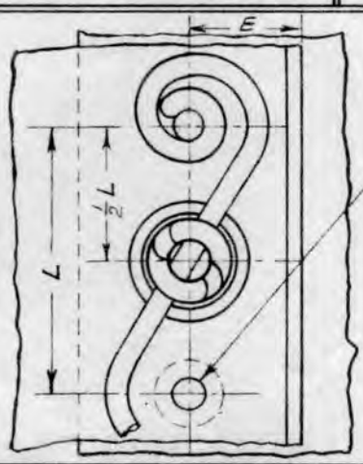
OPERATION 4
INSERT FASTENER & CLINCH



STANDARD SPRING INSTALLATION

TYPICAL VIEW FROM INSIDE SHOWING OVERLAP





DRILL # 30 B C'SINK $\frac{1}{4}$ D × 110° FOR R.H. RIVET

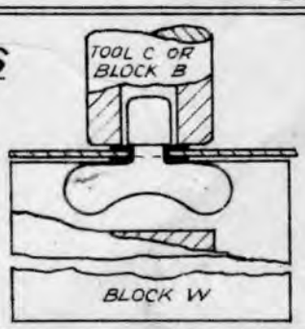
FOR TYPE A – E = $\frac{3}{8}$ MIN.

FOR TYPES B, F, FA – E = $\frac{1}{2}$ MIN.

WING TYPES AW & BW

OPERATION 4
CLINCH

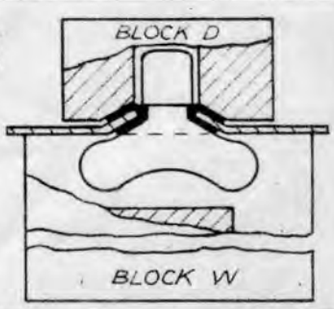
OTHER OPERATIONS SAME AS FOR TYPES A & B



WING TYPES FW & FAW

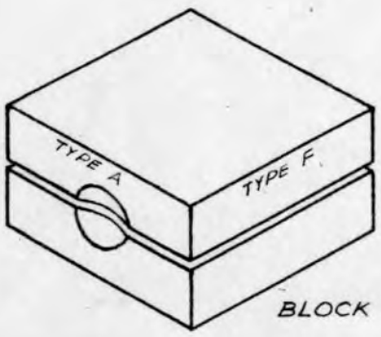
OPERATION 4
INSERT FASTENER & CLINCH

OTHER OPERATIONS SAME AS FOR TYPES F & FA



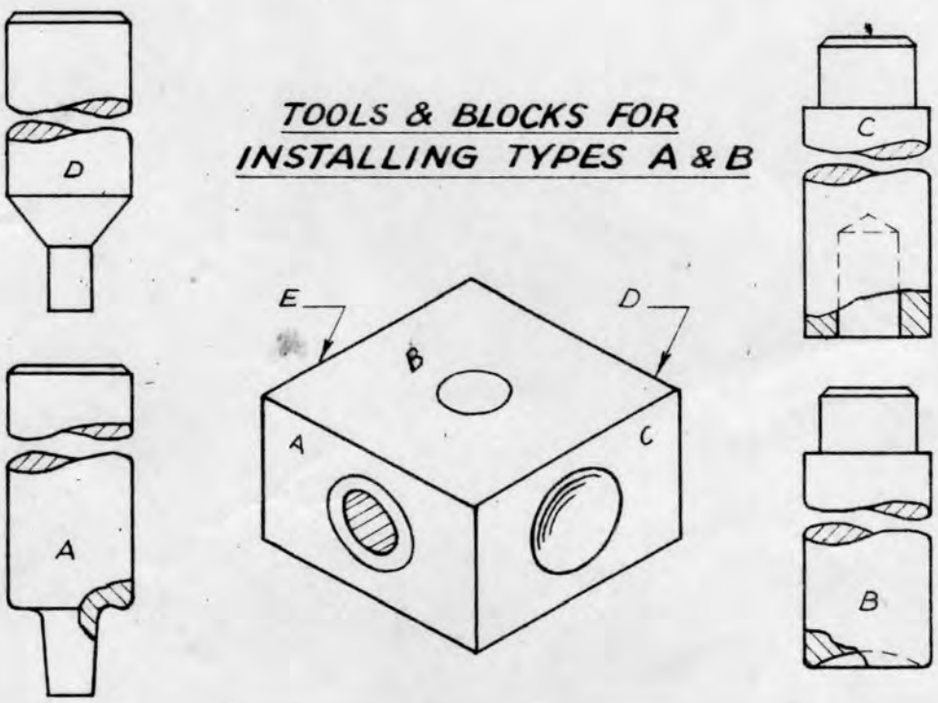
Date 26 10 42.	**DZUS FASTENERS – INSTALLATION & INSTRUCTIONS**	
Drawn M H		
Checked [illegible]	Issue No.	A.D.S. 32 B

USE BLOCK W FOR ALL WING TYPE FASTENERS

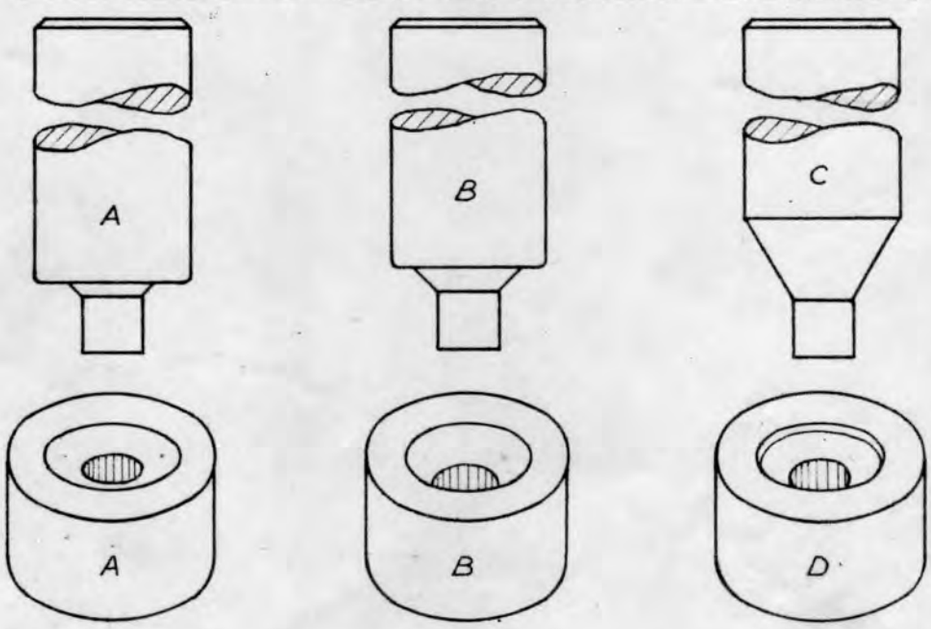


SELECT SIDE OF BLOCK MARKED WITH LETTER CORRESPONDING TO THE TYPE OF FASTENER USED

TOOLS & BLOCKS FOR INSTALLING TYPES A & B



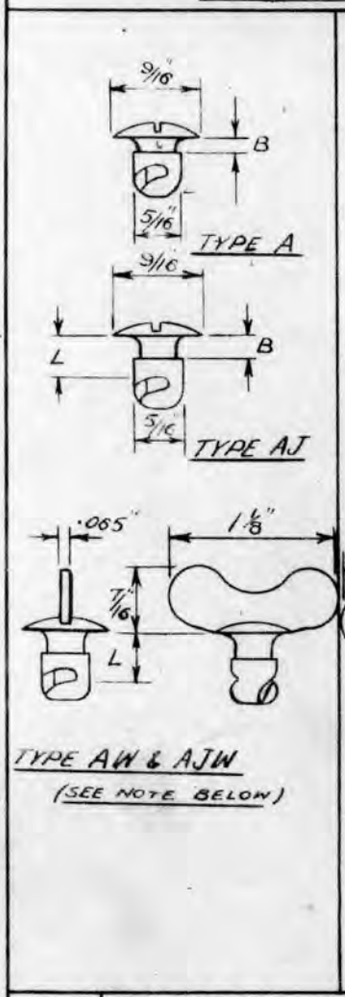
TOOLS & BLOCKS FOR INSTALLING TYPES F & FA

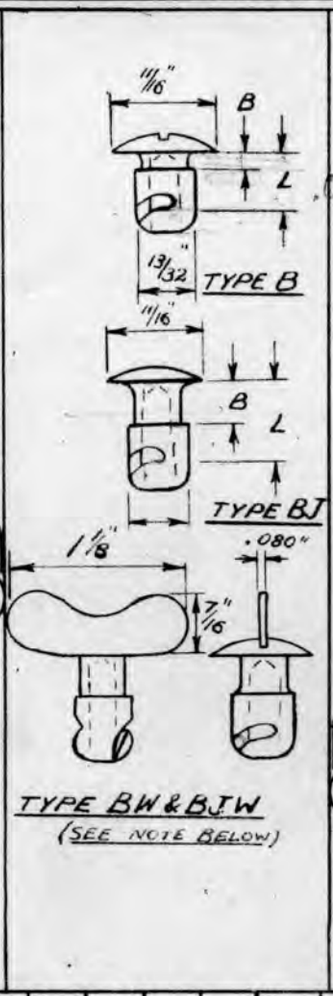


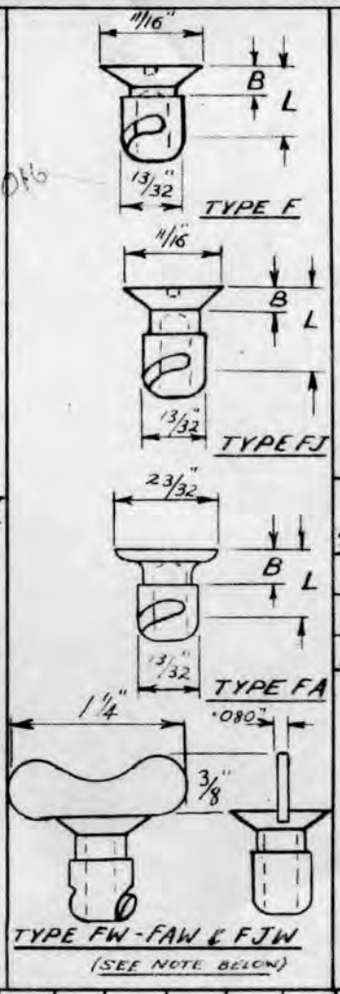
THESE TOOLS ARE CASE HARDENED— STRIKE WITH SOFT FACED MALLET ONLY

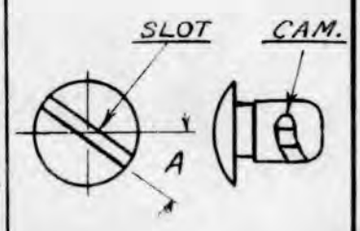
Date 26·10·42	**DZUS FASTENERS**—INSTALLATION & INSTRUCTIONS	
Drawn M.H.		
Checked	Issue No	A.D.S. 32 C

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.









TYPE OF FASTENER	APPROX. ANGLE "A"
A - AJ	30°
B - BJ	17°
F - FA - FJ	23°

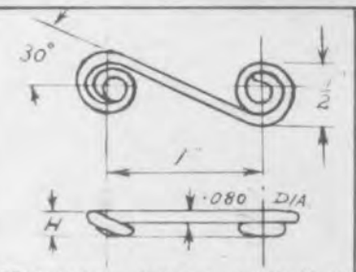
	FASTENER PART NOS.	30	35	40	45	46	50	56	60	70	80	90	100	LONGER BY INCREMENTS	250
TYPE	DIMENSION L	.300	.350	.400	.450	.460	.500	.560	.600	.700	.800	.900	1.00	OF .100 TO	2.50
A	DIMENSION B	.100	.100	.100			.100		.100	.100	.100	.100	.100	REMAINS .100	.100
	MATERIAL GRIP	130	180	230			330		430	530	630	730	830	INCREASES BY .10 TO	2.330
	GROMMET NO	375	375	375			375		375	375	375	375	375	.375	375
	COMB. WEIGHT	.014	.0149	.0158			.0175		.0192	.0201	.0243	.0243	.026	TO	.051
AJ	DIMENSION B		.125	.190	.190		.250		300	400	.500	.600	.700	REMAINS .700	.700
	MATERIAL GRIP		180	230	280		330		430	530	630	730	830	INCREASES BY .10 TO	2.330
	GROMMET NO		375	375	375		375		375	6A-45	6A-55	6A-65	6A-75	" " "	6H-225
	COMB. WEIGHT		.0145	.0149	.0154		.0162		.0175	.0194	.020	.0226	.0242	TO	.054
B	DIMENSION B			.125			.125		.125	.125	.125	.125	.125	REMAINS .125	.125
	MATERIAL GRIP			.175			.275		375	475	575	615	775	INCREASES BY .10 TO	2.275
	GROMMET NO			500			500		500	500	500	500	500	500	500
	COMB. WEIGHT			.0269			.0295		.0318	.0345	.0369	.0426	.0423	TO	.081
BJ	DIMENSION B			.188			250		300	350	450	550	650	REMAINS .650	.650
	MATERIAL GRIP			.175			275		375	475	575	675	775	INCREASES BY .10 TO	2.275
	GROMMET NO			500			500		500	6B-40	6B-50	6B-60	6B70	" " "	6B-220
	COMB. WEIGHT			.0252			.0278		.0313	.0325	.0345	.0372	.0397	TO	.085
F	DIMENSION B						234		234	234	234	254	234	REMAINS 234	.234
	MATERIAL GRIP						140		240	340	440	540	640	INCREASES BY .10 TO	2.140
	GROMMET NO						502		502	502	502	502	502	502	502
	COMB. WEIGHT						.0291		.0334	.0357	.038	.040	.042	TO	.077
FA	DIMENSION B					.250		.250		USE SPRING No 200 INSTEAD OF 1375					
	MATERIAL GRIP					.100		.200							
	GROMMET NO					502		502							
	COMB. WEIGHT					.0291		.0313							
FJ	DIMENSION B						200		300	350	450	550	650	REMAINS 650	.650
	MATERIAL GRIP						140		240	512	.612	.712	812	INCREASED BY .10 TO	2.312
	GROMMET NO						502		502	6F-40	6F-50	6F-60	6F70	" " "	GF 220
	COMB. WEIGHT						.0291		.0326	.035	.035	.037	.039	TO	.021

FASTENERS LEFT OF HEAVY LINE ARE CARRIED IN STOCK ALL OTHERS MADE ON ORDER. MATERIAL GRIP COMBINED THICKNESS OF 2 OR MORE SHEETS OR PANELS THAT CAN BE HELD BY STD. PARTS, COMBINED WEIGHT = WT. OF SPRING FASTENER & GROMMET.

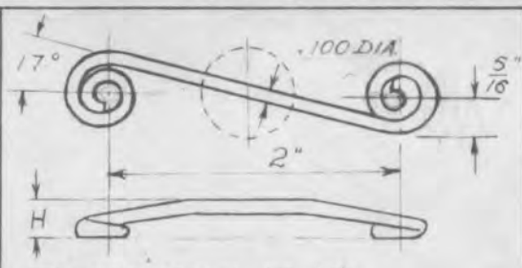
WING TYPE FASTENERS ARE MADE ON ORDER ONLY AND SHOULD BE IDENTIFIED BY ADDING LETTER "W" TO THE TYPE OF FASTENER REQUIRED.

Date: 22-1-43	Title: FASTENER TYPES	ADS 32D
Drawn: M.S.		
Checked: T.S.J.		Copied From -

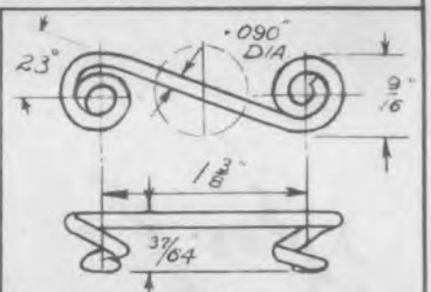
THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.



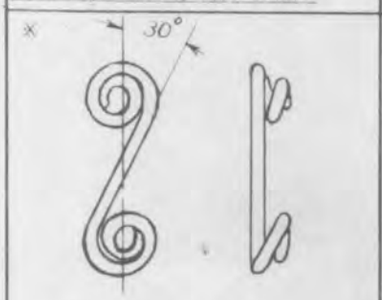
STANDARD SPRING N° 100 H·188
SPECIAL SPRING N° 100 A H·250
FOR TYPE A·AJ FASTENER



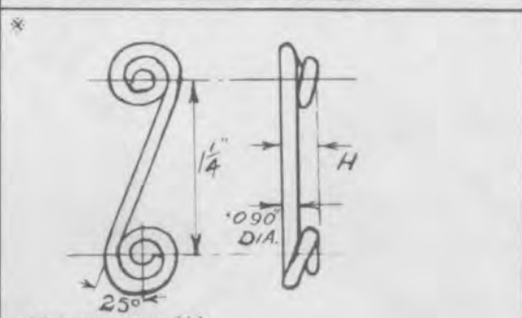
STANDARD SPRING N° 200
SPECIAL SPRING N° 200 B
FOR TYPE B·BJ FASTENERS



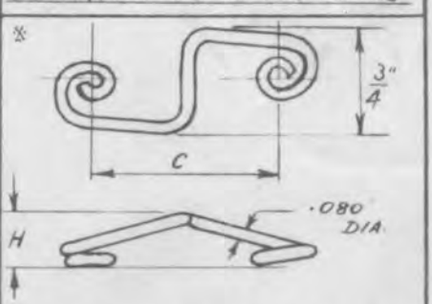
SPRING N° 1375
FOR TYPE F·FJ·FA FASTENERS



SPRING N°	H
1·30	1/4"
1·90 B	3/8"

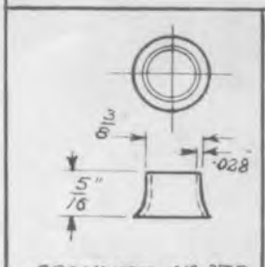


SPRING N°	H
125	1/4"
1250	3/8"

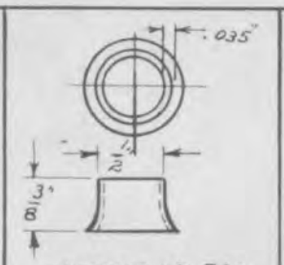


SPRING N°	C	H
Z 1375	1 3/8"	1/4"
Z 1375 B	1 3/8"	3/8"

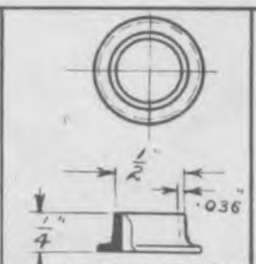
RECOMMENDED DEFLN FOR SPRING N° 100 & 100A ·047" FOR ALL OTHERS ·062"
MOUNTING HOLES IN ALL SPRINGS ARE 1/8" DIA.
* SPECIAL SPRINGS FOR SPECIAL INSTALLATIONS FOR TYPE B·BJ·F·FJ ONLY. SPRING N° 1·90 IS FOR CORNER INSTALLATIONS. USE STANDARD SPRINGS WHENEVER POSSIBLE.



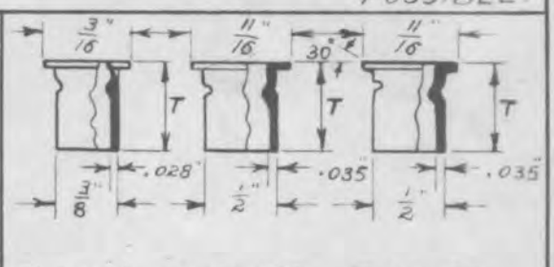
GROMMET N° 375



GROMMET N° 500



GROMMET N° 502



TYPE GA TYPE GB TYPE GF

BOTTOM FLANGE
TYPICAL UNIT ASSEMBLED

GROMMET N°	DIM. T	GROMMET N°	DIM. T
GA - 45	·450	GB OR GF 40	·400
GA - 55	·550	" " " 50	·500
GA - 65	·650	" " " 60	·600
GA - 75	·750	" " " 70	·700
LONGER BY INCREMENTS OF ·100 TO			
GA - 225	2·250	GF OR GB 220	2·20

WHEN BOTTOM FLANGE IS REQD. ADD LETTER "F" TO THE TYPE IDENTIFICATION OF THE GROMMET FORM BOTTOM FLANGE ON INST^N THESE GROMMETS ARE FACTORY ASSEMBLED TO THE FASTENERS & ARE MADE ON ORDER ONLY.

SIZES OF HOLES RECOMMENDED FOR INSTALLING GROMMETS.

FOR N° 375 DRILL 3/8" FOR N° 500 DRILL 1/2"
FOR N° 502 DRILL 7/16" & DIMPLE WITH TOOL A & BLOCK A. OF TYPE 'F' INSTALLATION TOOLS.
FOR SPECIAL GROMMETS HOLES SHOULD BE SIZED TO PRODUCE A PRESS FIT.

IN SUPPORT WITHOUT DIMPLING.

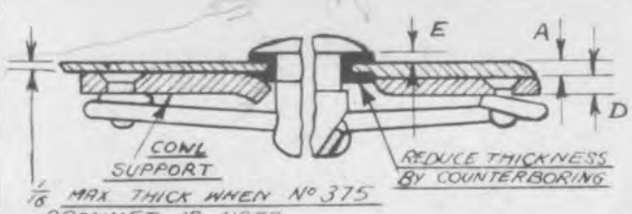
FOR TYPES A & AJ DRILL 11/32" FOR B·BJ·F·FJ DRILL 7/16"

FOR DIMPLING OF SUPPORT

FOR TYPE A DRILL 5/16" & DIMPLE WITH TOOL D & BLOCK D OF TYPE A INSTALLATION TOOLS.
FOR TYPE B DRILL 13/32" & DIMPLE WITH TOOL D & BLOCK D OF TYPE B INSTALLATION TOOLS
FOR TYPES F & FA DRILL 7/16" & DIMPLE WITH TOOL B & BLOCK B OF TYPE F INSTALLATION TOOLS.

Date: 25·1·43	Title: GROMMETS	ADS 32E
Drawn: M.S		
Checked: T.S.J.		Copied from:-

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

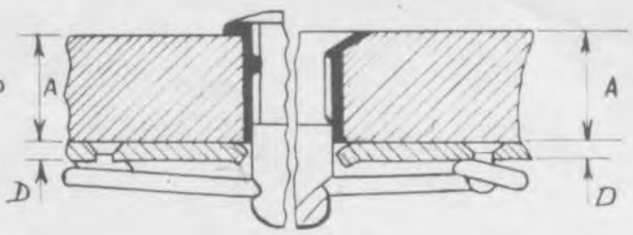


1/16 MAX THICK WHEN No 375 GROMMET IS USED

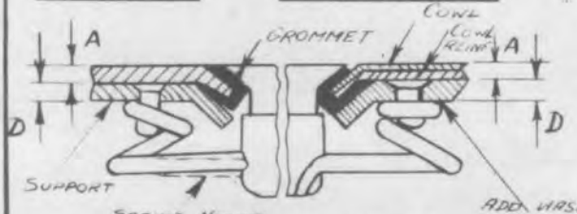
3/32" MAX WITH GROMMET No 500 OR 502

LEFT SIDE - IN THIN PLATE TYPE A & B

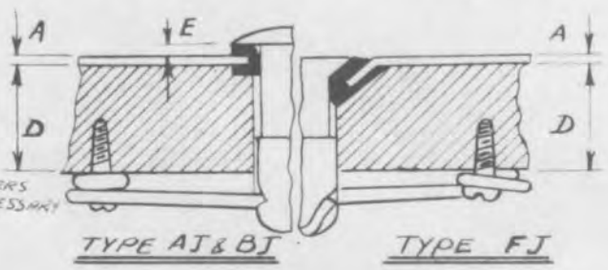
RIGHT SIDE IN HEAVY PLATE TYPE AJ & BJ



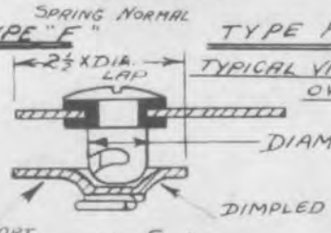
TYPE AJ & BJ TYPE FJ



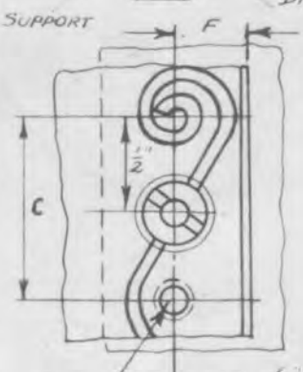
SPRING NORMAL TYPE "F" TYPE FA



TYPE AJ & BJ TYPE FJ



TYPICAL VIEW SHOWING OVER-LAP.



DRILL No 30 & CSK 1/4 DIA X .110" FOR RIVET

FOR TYPE A, F = 3/8" MIN.

FOR TYPES B-F-FA, F = 1/2" MIN.

APPROX. HOLDING LOADS OF STD. PARTS

TYPE OF FASTENER	TENSILE STRENGTH AT BREAKING POINT	SPRING No	TENSION UNDER REQD. DEFLN.	SHEAR STRENGTH
A	1000 lbs.	100	50 lbs.	1100 lbs
B-F-FA	1500 lbs.	200	50 lbs.	1600 lbs
		1375	65 lbs.	1400 lbs

TO DETERMINE LENGTH OF FASTENER REQD.

FOR TYPES A-AJ-B-BJ ADD A + D + E + HEIGHT OF SPRING SUBTRACT REC. DEFLN OF SPRING

FOR TYPES F-FA-FJ ADD A + D + HEIGHT OF SPRING SUBTRACT REC. DEFLN. of SPRING

ORDER FASTENER WITH L DIMENSION NEAREST TO REQD LENGTH IF REQD. LENGTH IS LESS THAN L DIMN OF FASTENER ADD WASHER UNDER SPRING SEATS TO EQUAL THE DIFFERENCE

MATERIALS & FINISHES

FASTENERS ARE MADE OF NICKEL STEEL HEAT TREATED & CADMIUM PLATED

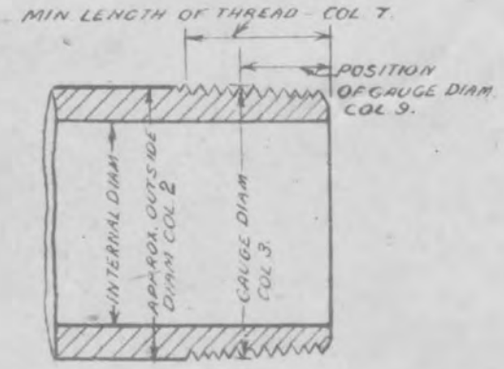
SPRINGS ARE MADE OF MUSIC WIRE & CADMIUM PLATED

GROMMETS ARE MADE OF ALUMINIUM.

WINGS FOR TYPE A & AJ FASTENERS ARE MADE OF STEEL & CADMIUM PLATED.

WINGS FOR TYPE B-BJ-F-FJ & FA FASTENERS ARE MADE OF DURALUMIN & ANODISED.

Date: 26-1-43	Title: TYPICAL INSTALLATIONS	ADS 32 F
Drawn: MS		
Checked: T.S.J.		Copied from:-

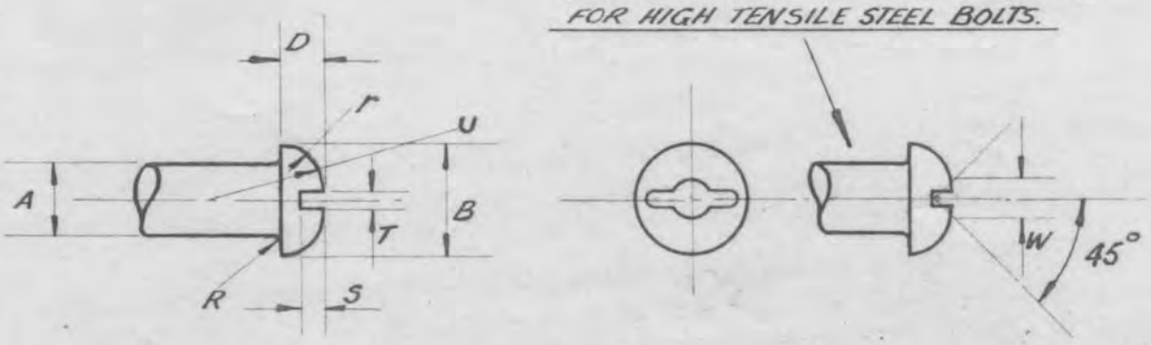


1	2	3	4	5	6	7.	8	9	10	11
NOMINAL BORE OF TUBE.	APPROX OUTSIDE DIAM OF BLACK TUBE	GAGE DIAMETER	DEPTH OF THREAD	CORE DIAM MEASURED AT SAME DISTANCE FROM END OF PIPE AS THE GAUGE DIAM.	NUMBER OF THREADS PER INCH	LENGTH OF THREAD. L ON PIPE END MIN.	LENGTH OF THREAD. IN COUPLER MIN.	DISTANCE OF GAUGE DIAMETER FROM PIPE END (CLASS T. TAPER SCREW) STANDARD	MAX	MIN
1/8	13/32	0·383	0·0230	0·337	28	3/8	3/4	5/32	0·18	0·13
1/4	17/32	0·518	0·0335	0·451	19	7/16	1/8	3/16	0·22	0·16
3/8	11/16	0·656	0·0335	0·589	19	1/2	1	1/4	0·29	0·21
1/2	27/32	0·825	0·0455	0·734	14	5/8	1 1/4	1/4	0·29	0·21
5/8	15/16	0·902	0·0455	0·811	14	5/8	1 1/4	1/4	0·29	0·21
3/4	1 1/16	1·041	0·0455	0·950	14	3/4	1 1/2	3/8	0·44	0·31
7/8	1 7/32	1·189	0·0455	1·098	14	3/4	1 1/2	3/8	0·44	0·31
1	1 11/32	1·309	0·0580	1·193	11	7/8	1 3/4	3/8	0·44	0·31
1 1/4	1 11/16	1·650	0·0580	1·534	11	1	2	1/2	0·58	0·42
1 1/2	1 29/32	1·882	0·0580	1·766	11	1	2	1/2	0·58	0·42

DATE 11 - 1 - 43.	TITLE. BRITISH STD. PIPE THREADS	ADS. 33
TRACED E. MASON		
CHECKED	ISSUE Nº	COPIED FROM MACHINIST'S HANDBOOK

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

DETAILS OF IDENTIFCATION C'S'K FOR HIGH TENSILE STEEL BOLTS.



DIAMETER OF BOLT.	DIAMETER OF HEAD	THICKNESS	SCREWDRIVER SLOT.		RADIUS UNDER HEAD MAX.	RADIUS OF DOME	CORNER RADIUS	DIAMETER OF IDENT. C'SK. FOR H.T. S.BOLTS ONLY.
			DEPTH	WIDTH				
A	B	D	S	T	R	U	r	W
6 B.A.	·194" ·184"	·077" ·072"	·046"	·024" ·034"	·02"	·193"	·072"	·07"
4 B.A.	·252" ·242"	·099" ·093	·060"	·030" ·040"	·02"	·248"	·092	·09
2 B.A.	·319" ·309"	·130" ·123"	·078"	·040" ·050"	·02"	·324"	·120"	·11

1. ROUND HEAD BOLTS AS SHOWN ABOVE ARE TO BE USED ONLY WHERE THE BOLT IS IN SUCH APOSITION THAT THE SCREWDRIVER SLOT WILL BE ACCESSIBLE WITHOUT REMOVAL OF ADJACENT PARTS WHEN USING A SCREDRIVER OF APPROPIATE DIMENSIONS I.E. NO SPECIAL TOOL WILL BE REQUIRED TO HOLD THE HEAD AND THE HEXAGON HEAD IS NOT ESSENTIAL FOR LOCKING PURPOSES.

2. HIGH TENSILE BOLTS HAVE A DIMPLE IN THE SLOT AS SHOWN. IN ALL OTHER RESPECTS THE REQUIREMENTS OF D.T.D. SPECIFICATIONS 398 FOR LOW TENSILE COLD HEADED STEEL BOLTS, 401 FOR HIGH TENSILE COLD HEADED STEEL BOLTS & 523 FOR LIGHT ALLOY COLD HEADED BOLTS APPLY. TESTS HAVE SHOWN THE STRENGTH OF A ROUND HEAD TO THE DIMENSIONS SHOWN IS AT LEAST EQUAL TO THE STRENGTH OF THE BOLT IN TENSION.

Redrown.- R.Poynter.	ROUND HEADED BOLTS. (COLD HEADED.)	A.D.S. 34A.
Date.- 15-5-44		
Checked.- [signature]		Copied From Data Sht. 6A.

ISSUE 2. REVISED TO ADM527.

3. BOLTS SHOULD BE CALLED UP BY QUOTING THE CORRESPONDING B.S.S. PART NUMBER WITH THE ADDITION OF THE LETTER "R", e.g. 4 BA LOW TENSILE COLD HEADED BOLTS WITH ROUND HEAD & LENGTH OF PLAIN SHANK 0·5", WILL BE PART Nº 6 A1/5 B.R.

Date: 15-1-43	Title: ROUND HEADED BOLTS CONTº (COLD HEADED)	ADS. 34 B
Drawn: M.S.		
Checked:		Copied From: DATA SHT. 68

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

FITTING OF RIVETS, TAPER PINS, & BOLTS WITH DRILL SIZES

DIAMETER	RIVETS		TAPER	
	STANDARD DRILL	NOMINAL SIZE	STANDARD DRILL	NOMINAL SIZE
1/16"	No 51	.067"	No 53	.0595"
3/32"	No 40	.098"	No 43	.089"
1/8"	No 30	.1285"	No 31	.120"
5/32"	No 21	.159"	No 23	.1540"
3/16"	No 12	.189"	No 13	.1850"

SIZES OF DRILLS FOR HOLES TO SUIT A1 AND A.G.S. BOLTS, & SP4 PINS

DIAMETER	TABLE I		TABLE II	
	STANDARD DRILL	NOMINAL SIZE	STANDARD DRILL	NOMINAL SIZE
6BA	No 33	.1130"	No 31	.120"
4BA	No 27	.1440"	No 25	.1495"
2BA	No 13	.1850"	No 11	.1910"
7/32" B.S.F.	No 2	.221"	No 1	.228"
1/4" B.S.F.	E	.250"	G	.261"
9/32" B.S.F.	K	.281"	M	.295"
5/16" B.S.F.	O	.316"	P	.323"
3/8" B.S.F.	V	.377"	25/64" DIAM	.3906"

NOTES

1. Drill sizes in Table II are to be used wherever practicable. Drill sizes in Table I are for bolts or pins for which Fit "A" or Fit "B" holes are not warranted, but for which closer tolerances than called for in Table II are required.
2. A1 and A.G.S. Bolts cannot be threaded down.
3. Bolts have a radius under head. All plates or fittings must be countersunk where necessary to accommodate this .02" at 45° for B.A sizes & .03" at 45° for B.S.F sizes (up to 1")
4. All H.T.S. Bolts must be fitted with H.T.S. Nuts as standard.

DATE 26·8·42	TITLE	ADS 35
DRAWN B.P.M.	FITTING OF BOLTS PINS & RIVETS	
CHECKED L.W.	ISSUE No 1	COPIED FROM Data Sht No. 6

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

NOMINAL SIZE	DIMENSION	BOLT HOLES				HOLES FOR SHACKLE PINS ETC.			
		GOOD FIT	CLEAR			GOOD FIT	PIN HOLE		
			DRILL No.	SIZE	CLEARNESS ×1000		DRILL No.	SIZE	CLEARNESS ×1000
6BA	·110	–	31	·120	10	–	–	–	–
4BA	·142	–	24	·152	10	–	–	–	–
5/32"	·15625	–	–	–	–	Ream Nominal +·002 +·001	20	·161	4 3/4
2BA	·185	+·004 +·001 Ream Nominal	10	·193	8	–	–	–	–
3/16"	·1875		–	–	–		9	·196	8 1/2
7/32"	·21875		1	·228	10 1/4	Ream Nominal +·002 +·001	1	·228	10 1/4
1/4"	·25		G	·261	11		G	·261	11
9/32"	·28125		1/64" above nominal				M	·295	13 3/4
5/16"	·3125						1/64" above nominal		
11/32"	·34375								
3/8" to 1/2"	–					Ream Nominal +·003 +·001			
Over 1/2"		Ream Nominal +·005 +·001							

DATE 31·8·42	TITLE HOLES (AIRCRAFT DIVISION AUSTRALIAN CODE)	ADS 37	
DRAWN B P M			
CHECKED W.D.	ISSUE No 1	COPIED FROM	

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

A TABLE OF

INCH AND MILLIMETRE EQUIVALENTS.

1 inch = 25·399978 millimetres. 1 millimetre = ·039370113 inch

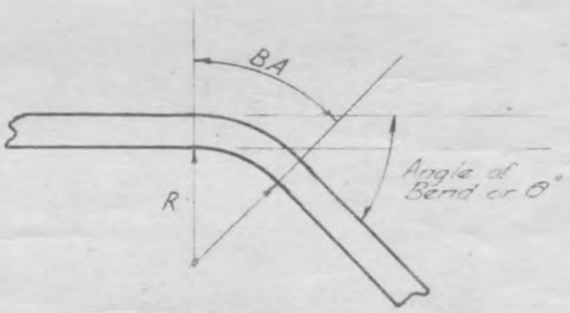
INCHES.		M/M.	INCHES.		M/M.	INCHES.		M/M.	INCHES.		M/M.	INCHES.		M/M.	INCHES.	M/M.
	·01	·254	13/64	·203125	5·1594	13/32	·40625	10·3187	39/64	·609375	15·4781		·807087	20·5	1·19110	30
1/64	·015625	·3969		·21	5·334		·41	10·414		·61	15·494		·81	20·574	1·37795	35
	·019685	·5		·216536	5·5		·413386	10·5		·610237	15·5	13/16	·8125	20·6375	1·57480	40
	·02	·508	7/32	·21875	5·5562		·42	10·668		·62	15·748		·82	20·828	1·77165	45
	·03	·762		·22	5·588	27/64	·421875	10·7156	5/8	·625	15·8750		·826772	21	1·96851	50
1/32	·03125	·7937		·23	5·842		·43	10·922		·629922	16	53/64	·828125	21·0344	2	50·80
	·039370	1	15/64	·234375	5·9531		·433071	11		·63	16·002		·83	21·082	2·16536	55
	·04	1·016		·236221	6	7/16	·4375	11·1125		·64	16·256		·84	21·336	2·36221	60
3/64	·046875	1·1906		·24	6·096		·44	11·176	41/64	·640625	16·2719	27/32	·84375	21·4312	2·55906	65
	·05	1·270	1/4	·25	6·350		·45	11·430		·649607	16·5		·846457	21·5	2·75591	70
	·059055	1·5		·255906	6·5		·452756	11·5		·65	16·510		·85	21·590	2·95276	75
	·06	1·524		·26	6·604	29/64	·453125	11·5094	21/32	·65625	16·6687	55/64	·859375	21·8281	3	76·20
1/16	·0625	1·5875	17/64	·265625	6·7469		·46	11·684		·66	16·764		·86	21·844	3·14961	80
	·07	1·778		·27	6·858	15/32	·46875	11·9062		·669292	17		·866142	22	3·34646	85
5/64	·078125	1·9844		·275591	7		·47	11·938		·67	17·018		·87	22·098	3·54331	90
	·078740	2		·28	7·112		·472441	12	43/64	·671875	17·0656	7/8	·875	22·2250	3·74016	95
	·08	2·032	9/32	·28125	7·1437		·48	12·192		·68	17·272		·88	22·352	3·93701	100
	·09	2·286		·29	7·366	31/64	·484375	12·3031	11/16	·6875	17·4625		·885827	22·5	4	101·60
3/32	·09375	2·3812		·295276	7·5		·49	12·446		·688977	17·5		·89	22·606	4·33071	110
	·098425	2·5	19/64	·296875	7·5406		·492126	12·5		·69	17·526	57/64	·890625	22·6219	4·72441	120
	·1	2·540		·3	7·620	1/2	·5	12·700		·7	17·780		·9	22·860	5	127·00
7/64	·109375	2·7781		·31	7·874		·51	12·954	45/64	·708125	17·8594		·905513	23	5·11811	130
	·11	2·794	5/16	·3125	7·9375		·511811	13		·708662	18	29/32	·90625	23·0187	5·51181	140
	·118110	3		·314961	8	33/64	·515625	13·0969		·71	18·034		·91	23·114	5·90552	150
	·12	3·048		·32	8·128		·52	13·208	23/32	·71875	18·2562		·92	23·368	6	152·40
1/8	·125	3·1750	21/64	·328125	8·3344		·53	13·462		·72	18·288	59/64	·921875	23·4156	6·29922	160
	·13	3·302		·33	8·382	17/32	·53125	13·4937		·728347	18·5		·925198	23·5	6·69292	170
	·137795	3·5		·334646	8·5		·531496	13·5		·73	18·542		·93	23·622	7	177·80
	·14	3·556		·34	8·636		·54	13·716	47/64	·734375	18·6531	15/16	·9375	23·8125	7·08662	180
9/64	·140625	3·5719	11/32	·34375	8·7312	35/64	·546875	13·8906		·74	18·796		·94	23·876	7·48032	190
	·15	3·810		·35	8·890		·55	13·970		·748032	19		·944883	24	7·87402	200
5/32	·15625	3·9687		·354331	9		·551181	14	3/4	·75	19·050		·95	24·130	8	203·20
	·157480	4	23/64	·359375	9·1281		·56	14·224		·76	19·304	61/64	·953125	24·2094	8·26772	210
	·16	4·064		·36	9·144	9/16	·5625	14·2875	49/64	·765625	19·4469		·96	24·384	8·66142	220
	·17	4·318		·37	9·398		·57	14·478		·767717	19·5		·964568	24·5	9	228·60
11/64	·171875	4·3656		·374016	9·5		·570866	14·5		·77	19·558	31/32	·96875	24·6062	9·05513	230
	·177165	4·5	3/8	·375	9·5250	37/64	·578125	14·6844		·78	19·812		·97	24·638	9·44893	240
	·18	4·572		·38	9·652		·58	14·732	25/32	·78125	19·8437		·98	24·892	9·84252	250
3/16	·1875	4·7625		·39	9·906		·59	14·986		·787402	20		·984252	25	10	254·0
	·19	4·826	25/64	·390625	9·9219		·590552	15		·79	20·066	63/64	·984375	25·0031		
	·196851	5		·393701	10	19/32	·59375	15·0812	51/64	·796875	20·2406		·99	25·146		
	·2	5·080		·4	10·160		·6	15·240		·8	20·320		1	25·40		

DATE 10·9·42	TITLE INCH & MILLIMETRE EQUIVALENTS.		ADS. 38.
DRAWN. T.S.U.			
CHECKED LAB.	ISSUE NO. 1		TRACED FROM

GAUGE	THICKNESS	MIN. RADIUS	ALLOWANCE FOR 90°	FRACTION TO BE MULTIPLIED BY DEGREES
Nº	INCHES	INCHES	INCHES	INS/DEGREES OF BEND
6	·192	·38	·748	·00831
8	·160	·25	·518	·00576
10	·128	·20	·415	·00461
12	·104	·16	·333	·00370
14	·08	·12	·251	·00279
16	·064	·08	·176	·00196
17	·056	·06	·139	·00154
18	·048	·05	·116	·00129
20	·035	·04	·090	·00100
22	·028	·03	·0691	·000768
24	·022	·03	·0644	·000714
26	·018	·02	·0456	·000506
28	·015	·02	·0432	·000480

This chart utilises "Mean Radius".

Bend Allowance $\frac{\Pi(2R+T)\theta}{360}$



DATE 1·9·42	TITLE TABLE OF GAUGES & BENDING RADII	ADS 39
DRAWN B.P.M		
CHECKED E.C.V	ISSUE Nº 1	COPIED FROM

In aircraft design it is often necessary to specify the exact method of applying wood because of its anisotropic nature and physical properties. If not applied properly, in time, wood may cause a considerable amount of trouble because of expansion and contraction caused by changes in the humidity of the air.

Fig. 1, on accompanying sketch, shows a cross section of a log on which are denoted three characteristic "directions" - longitudinal L, radial R and tangent T. These three "directions" have different strength properties as well as different shrinkages, due to moisture changes. When we assume for the direction L the skrinkage = 1 we shall obtain for R an approximate shrinkage of 50 and for T an approximate shrinkage of 90 (for Sitka spruce).

Fig. 2 shows a block of wood which has been cut from log Fig. 1-A and on it is shown the main idea of technically describing the direction of the grain. The end grain is marked with a slightly curved double arrow. This double arrow denotes the tangential direction of the grain. The longitudinal direction L is marked with a straight arrow ——→ .

Fig. 3 shows the same block in projection with the same markings. When it is necessary to indicate the exact direction of the grain it is possible to note the angle between the tangential direction and the edge of the block as illustrated. It is also possible to give tolerances for the angle i.e. $\alpha = 30^{0} \pm 5^{0}$. This method is especially useful when describing the grain on glued blocks consisting of several layers, such as shown in Fig. 4.

Specifying the grain direction in laminations or in solid blocks is important in wooden aircraft because fittings are usually attached to them. In such blocks it is essential to direct the grain of the wood in the direction of the applied force and it is necessary to take care that shrinkage of blocks inside stationary fittings be as small as possible. In other cases, after a certain time, a large clearance may appear between fittings and wooden parts which could be very dangerous.

Fig. 4 shows a block consisting of three layers with different grain directions.

Fig. 5 is same block in projection on which are marked all required directions of the grain for each layer. In designating veneers of layers, each layer is numbered, No. 1 always being the face. These layers are usually at cross grain to each other at an angle to suit the needs of the designer. This angle to be indicated on the drawing as described for Fig. 3.

DATE 1-8-42.	TITLE WOOD IN AIRCRAFT DESIGN.	ADS 40A
DRAWN		
CHECKED WD.	ISSUED N° 1	COPIED FROM. CANADIAN DA. # 21

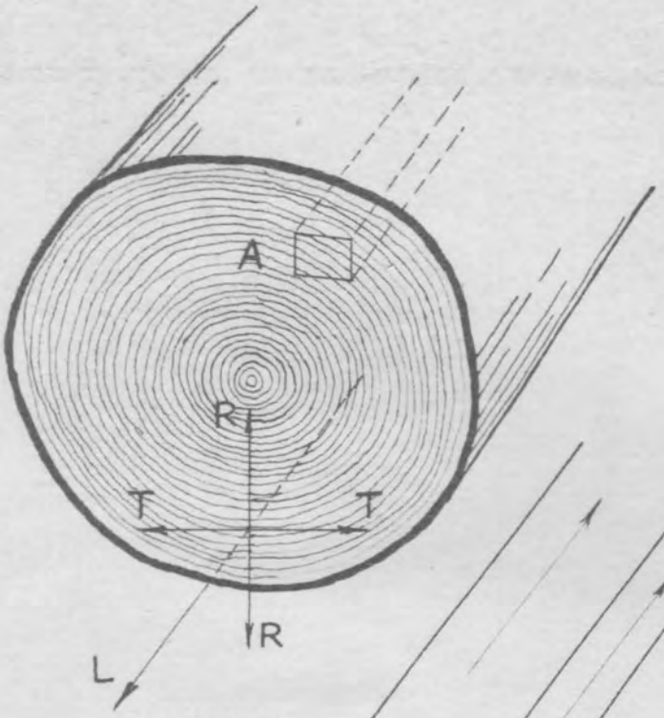


FIG. 1.

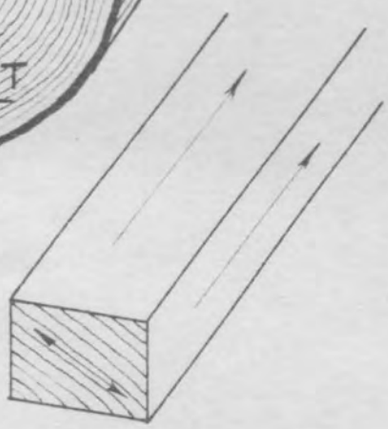


FIG. 2

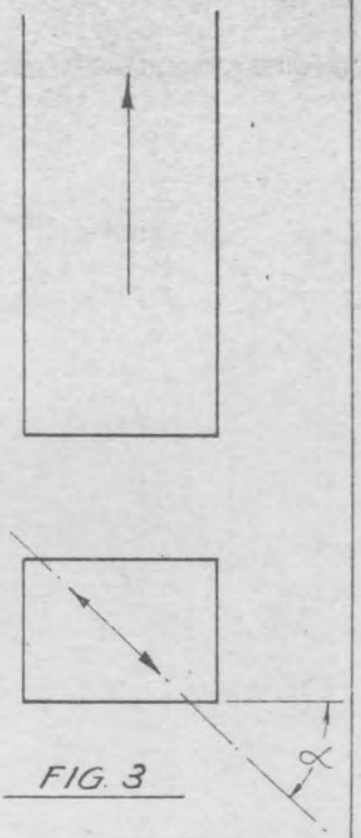


FIG. 3

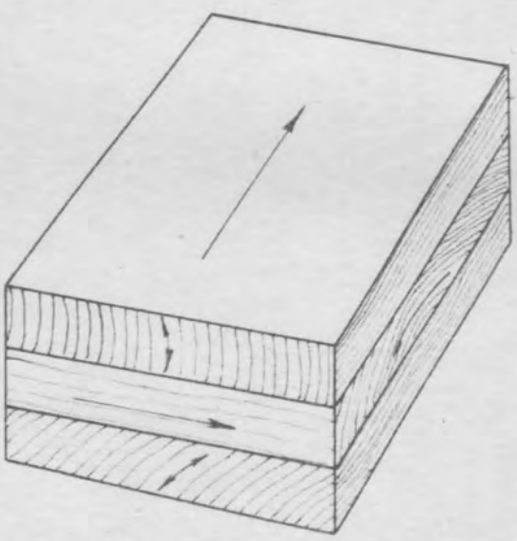


FIG. 4

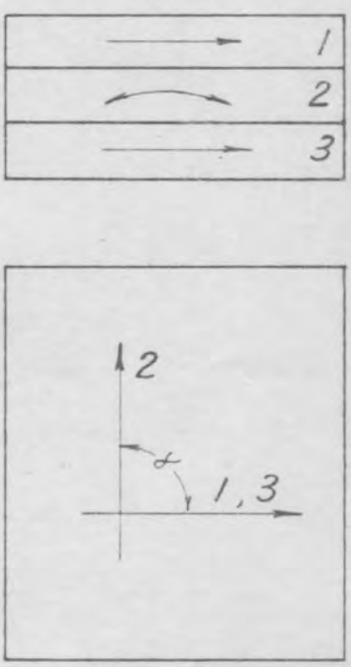


FIG. 5

DATE 28 8 42	TITLE	ADS 40B
DRAWN B P M	WOOD IN AIRCRAFT DESIGN	
CHECKED L. W.	ISSUE No 1	COPIED FROM Data Sht No 22

Spec for Douglas Fir

At 15% Moisture content

End Grain compression = 7000 lb/in²
Young's Modulus = 1,900,000 lb/in²
Modulus of Rupture = 10,000 lb/in²
Density at 15% = 32 lbs/cu. ft.
Izod = 5

Straight Grain
Solid = 1 in 15
Laminated = 1 in 12

Increase or decrease of values for 1% decrease or increase of moisture content between limits of 10 - 20% moisture content.

End Grain compression = 300 lb/in²
Young's Modulus = 40,000 lb/in²
Modulus of Rupture = 400 lb/in²

GENERAL INSTRUCTIONS ON DRAWING OFFICE PRACTICE.

Size of Sheets:-

A	7" X 9"
B	14" X 9"
C	19" X 14"
D	29" X 19"
E	39" X 14"
F	39" X 26"
H	52" X 29"

These dims. are border lines and except in the case of "A" size the Title Block to go in bottom R.H. corner - where the longest side is the bottom.

Scale:- Where two or more different scales are used on one drawing these should be noted on the appropriate views.

Lines - Projections:- (See AIS NO. 4/C

Dimensions:-

Decimals of inches, up to 100, are used throughout, except for nominal sizes of stock quoted in material list, where fractions or millimeters may be used if applicable.

Even numbers to two places of decimals are used wherever possible so that the dimension may be bisected without requiring an additional decimal place.

Dimensions which are not drawn to scale must be underlined. Drawings which are badly out of scale or distorted should be corrected or redrawn.

Overall dimensions from a datum are preferred to a series of dimensions which must be added to locate a point.

Dimensions should not be duplicated on various views or on a single view, except where they will add to the clarity of the drawing, and no more should be given than those required to produce the part.

All dimensions should read from the bottom of the drawing and their accompanying dimension line should be placed outside the figure.

Dimensions indicating the radius or diameter of a circle should be followed by R, RAD or DIA.

Dimension lines should be fine, full lines (broken where the dimensions are inserted) so as to contrast with the heavier outline of the part and should be placed outside the figure wherever possible.

Part Name:- The basic noun describing the part is placed first, followed with brief description, i.e:-

Panel - Instrument.
Bracket - Instrument Panel.

GENERAL INSTRUCTIONS ON DRAWING OFFICE PRACTICE. (3)

Calling up:- Each part must be called up once only. For clarity the balooning of the same part on another view or drawing is permitted provided it is marked "Ref. only". Parts may be grouped for single balooning provided the quantity is clearly marked "No. Off". Likewise two identical parts may be called up separately with the same proviso.

Handing:- Left Hand is always drawn first and the drawing noted to the effect, with the note, "RH - Opp Hand" - and the RH Part No. added, i.e:-

H 43276 LH Drawn
H 43277 RH Opp Hand.

In the quantity space the No. Off will be so many LH and so many RH, i.e:-

2 - LH
2 - RH

Alterations:- After a drawing or alteration has been approved, any further alterations must raise the Issue of the drawing, whether Experimental or Production Issue.

On going into Production Issue, the number follows on as e.g:-

Exp. Issue ¼ 2 Prod. Issue 3.

DATE 1-9-42	TITLE GENERAL INSTRUCTIONS.	ADS. 41.B.
DRAWN		
CHECKED MWD.	ISSUE No. 1	COPIED FROM Data Sht. No

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

TYPES & WEIGHTS OF LINES

OUTLINE OF PARTS

THE OUTLINE SHOULD STAND OUT CLEARLY
THICKNESS MAY VARY TO SUIT SIZE OF DRG.

SECTION LINES.

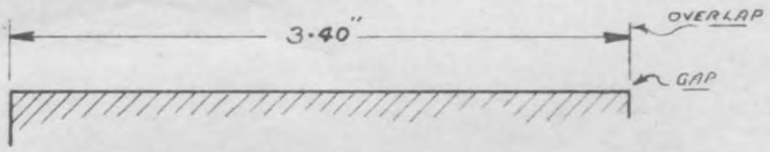
SPACED EVENLY TO MAKE A SHADE EFFECT

HIDDEN OUTLINES.

DO NOT USE EXCESSIVELY - MERELY TO CLARIFY DRG.

CENTRE LINES.

DIMENSIONING.

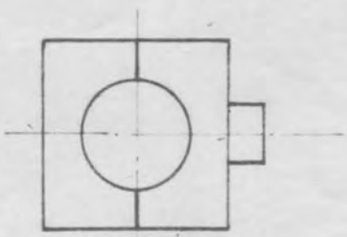


CUTTING PLANE

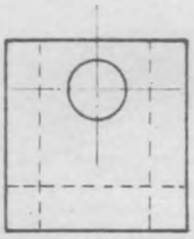
BREAK LINES.

ADJACENT PARTS (GHOSTING)

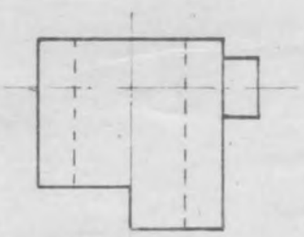
FIRST ANGLE OR ENGLISH AS BELOW TO BE USED ALWAYS. WHERE OTHER VIEWS ARE REQUIRED USE ARROWHEADS DENOTING DIRECTION TAKEN.



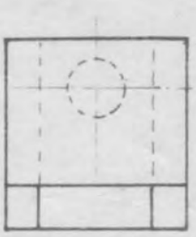
BOTTOM VIEW



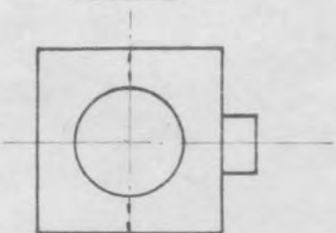
RIGHT END VIEW



FRONT VIEW



LEFT END VIEW



TOP VIEW

DATE 1-9-42. TITLE LINES & PROJECTIONS. ADS 41.C.

DRAWN

CHECKED WH. ISSUE No 1.

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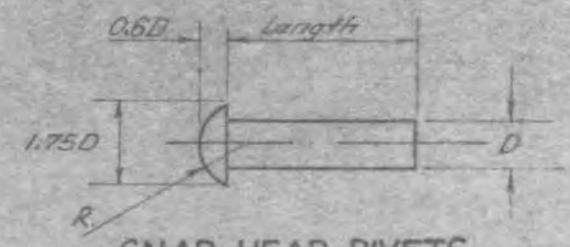
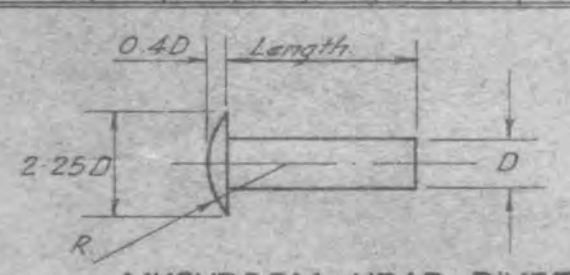


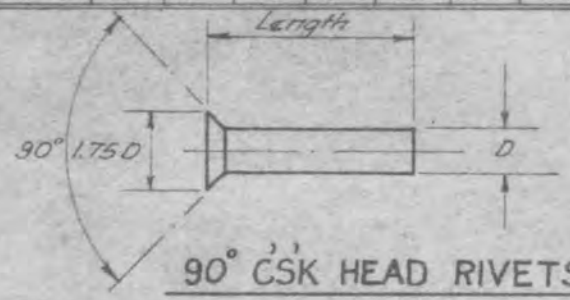
SNAP HEAD RIVETS

DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	.04"	.06"	.08"	.09"	.11"	.13"	.15"	.19"	.23"
DIA. OF HEAD	.11"	.16"	.22"	.27"	.33"	.38"	.44"	.55"	.66"
APP RAD OF HEAD R	.06"	.09"	.12"	.15"	.18"	.21"	.24"	.29"	.35"



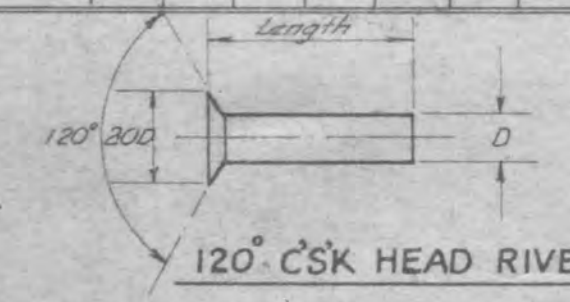
MUSHROOM HEAD RIVETS

DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	.025"	.038"	.050"	.063"	.075"	.088"	.100"	.125"	.150"
DIA. OF HEAD	.14"	.21"	.28"	.35"	.42"	.49"	.56"	.70"	.84"
APP RAD OF HEAD R	.11"	.17"	.22"	.27"	.35"	.39"	.44"	.55"	.66"



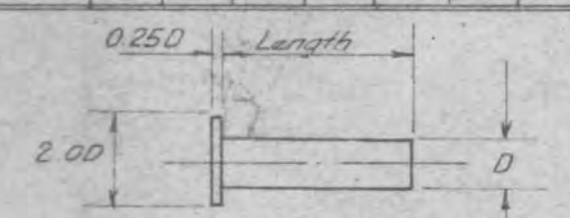
90° CSK HEAD RIVETS

DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	.023"	.035"	.047"	.059"	.070"	.082"	.094"	.117"	.141"
DIA. OF HEAD	.11"	.16"	.22"	.27"	.33"	.38"	.44"	.55"	.66"



120° CSK HEAD RIVETS

DIAMETER 'D'	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	.018"	.027"	.036"	.045"	.054"	.063"	.072"	.090"	.108"
DIA. OF HEAD	.125"	.188"	.250"	.313"	.375"	.438"	.500	.625"	.750"



FLAT HEAD RIVETS

DIAMETER 'D'	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
DEPTH OF HEAD	.016"	.023"	.031"	.039"	.047"	.055"	.063"
DIA. OF HEAD	.125"	.188"	.250"	.313"	.375"	.438"	.500

STD. No.	MATERIAL	SPECN.	TABLE REF.
A.S.155	ALUMINIUM	L.36	1
A.S.156	DURALUMIN	L.37	
A.S.157	MAGNESIUM ALLOY	D.T.D. 303	
A.S.455	MILD STEEL	20/32 TONS	
A.S.456	45% NICKEL ALLOY	D.T.D 237 or D.T.D.268	
A.S.457	MONEL METAL	D.T.D. 204A	
A.S.458	TUNGUM	D.T.D. 367	
A.S.459	COPPER	—	4
A.S.158	DURALUMIN	L.37	2
A.S.159	MAGNESIUM ALLOY	D.T.D. 303	
A.S.160	ALUMINIUM	L.36	4
A.S.161	DURALUMIN	L.37	2
A.S.162	MAGNESIUM ALLOY	D.T.D. 303	
A.S.460	MILD STEEL	20/32 TONS	1
A.S.461	45% NICKEL ALLOY	D.T.D. 268	
A.S.462	MONEL METAL	D.T.D. 204A	2
A.S.466	TUNGUM	D.T.D. 367	
A.S.467	COPPER	—	4
A.S.163	ALUMINIUM	L.36	4
A.S.164	DURALUMIN	L.37	2
A.S.165	MAGNESIUM ALLOY	D.T.D. 303	
A.S.463	MILD STEEL	20/32 TONS	3
A.S.464	45% NICKEL ALLOY	D.T.D. 268	
A.S.465	MONEL METAL	D.T.D. 204A	
A.S.468	TUNGUM	D.T.D. 367	
A.S.469	COPPER	—	4

TABL

DIA. "D"	1/16"	3/32"	1/8"	5/32"
LENGTH	PART			
1/8"	202			
3/16"	203	303	403	
1/4"	204	304	404	504
5/16"	205	305	405	505
3/8"	206	306	406	506
7/16"	207	307	407	507
1/2"	208	308	408	508
9/16"	209	309	409	509
5/8"	210	310	410	510
11/16"	211	311	411	511
3/4"	212	312	412	512
13/16"	213	313	413	513
7/8"	214	314	414	514
15/16"	215	315	415	515
1"	216	316	416	516
1 1/8"		318	418	518
1 1/4"		320	420	520
1 3/8"		322	422	522
1 1/2"		324	424	524
1 3/4"				
2"				

TABLE

DIA. "D"	1/16"	3/32"	1/8"	5/32"
LENGTH	PART N			
1/8"	202			
3/16"	203	303		
1/4"	204	304	404	
5/16"	205	305	405	505
3/8"	206	306	406	506
7/16"	207	307	407	507
1/2"	208	308	408	508
9/16"	209	309	409	509
5/8"	210	310	410	510
11/16"	211	311	411	511
3/4"	212	312	412	512
13/16"	213	313	413	513
7/8"	214	314	414	514
15/16"	215	315	415	515
1"	216	316	416	516
1 1/8"		318	418	518
1 1/4"		320	420	520
1 3/8"		322	422	522
1 1/2"		324	424	524
1 3/4"				
2"				

The last two figures in the tables denote of the rivets in 1/16 in figure or figures, de diameter in 1/32 inch

Method of calling up on drawing

AS.15 610

DATE 4

DRAWN

CHECKED

FT PTY. LTD., AUSTRALIA.

TABLE No. 1.

DIA. "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8"	202						For A.S.157 Only		
3/16"	203	303	403						
1/4"	204	304	404	504					
5/16"	205	305	405	505	605	705			
3/8"	206	306	406	506	606	706	806		
7/16"	207	307	407	507	607	707	807		
1/2"	208	308	408	508	608	708	808	1008	
9/16"	209	309	409	509	609	709	809	1009	1209
5/8"	210	310	410	510	610	710	810	1010	1210
11/16"	211	311	411	511	611	711	811	1011	1211
3/4"	212	312	412	512	612	712	812	1012	1212
13/16"	213	313	413	513	613	713	813	1013	1213
7/8"	214	314	414	514	614	714	814	1014	1214
15/16"	215	315	415	515	615	715	815	1015	1215
1"	216	316	416	516	616	716	816	1016	1216
1 1/8"		318	418	518	618	718	818	1018	1218
1 1/4"		320	420	520	620	720	820	1020	1220
1 3/8"		322	422	522	622	722	822	1022	1222
1 1/2"		324	424	524	624	724	824	1024	1224
1 3/4"						728	828	1028	1228
2"							832	1032	1232

TABLE No. 2.

DIA "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8"	202								
3/16"	203	303							
1/4"	204	304	404						
5/16"	205	305	405	505					
3/8"	206	306	406	506	606				
7/16"	207	307	407	507	607	707			
1/2"	208	308	408	508	608	708	808		
9/16"	209	309	409	509	609	709	809		
5/8"	210	310	410	510	610	710	810	1010	
11/16"	211	311	411	511	611	711	811	1011	
3/4"	212	312	412	512	612	712	812	1012	1212
13/16"	213	313	413	513	613	713	813	1013	1213
7/8"	214	314	414	514	614	714	814	1014	1214
15/16"	215	315	415	515	615	715	815	1015	1215
1"	216	316	416	516	616	716	816	1016	1216
1 1/8"		318	418	518	618	718	818	1018	1218
1 1/4"		320	420	520	620	720	820	1020	1220
1 3/8"		322	422	522	622	722	822	1022	1222
1 1/2"		324	424	524	624	724	824	1024	1224
1 3/4"						728	828	1028	1228
2"							832	1032	1232

TABLE No. 3.

DIA. "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8"	202								
3/16"	203	303							
1/4"	204	304	404						
5/16"	205	305	405	505					
3/8"	206	306	406	506	606				
7/16"	207	307	407	507	607	707			
1/2"	208	308	408	508	608	708	808		
9/16"	209	309	409	509	609	709	809		
5/8"	210	310	410	510	610	710	810	1010	
11/16"	211	311	411	511	611	711	811	1011	
3/4"	212	312	412	512	612	712	812	1012	1212
13/16"	213	313	413	513	613	713	813	1013	1213
7/8"	214	314	414	514	614	714	814	1014	1214
15/16"	215	315	415	515	615	715	815	1015	1215
1"	216	316	416	516	616	716	816	1016	1216
1 1/8"		318	418	518	618	718	818	1018	1218
1 1/4"		320	420	520	620	720	820	1020	1220
1 3/8"		322	422	522	622	722	822	1022	1222
1 1/2"		324	424	524	624	724	824	1024	1224
1 3/4"							828	1028	1228
2"							832	1032	1232

TABLE No. 4.

DIA "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"		
LENGTH	PART NUMBERS								
1/8"	202				Nos. above heavy line are for A.S.459 & A.S.469 only.				
3/16"	203	303	403						
1/4"	204	304	404	504					
5/16"	205	305	405	505	605				
3/8"	206	306	406	506	606	706	806		
7/16"	207	307	407	507	607	707	807		
1/2"	208	308	408	508	608	708	808		
9/16"	209	309	409	509	609	709	809		
5/8"	210	310	410	510	610	710	810		
11/16"	211	311	411	511	611	711	811		
3/4"	212	312	412	512	612	712	812		
13/16"	213	313	413	513	613	713	813		
7/8"	214	314	414	514	614	714	814		
15/16"	215	315	415	515	615	715	815		
1"	216	316	416	516	616	716	816		
1 1/8"		318	418	518	618	718	818		
1 1/4"		320	420	520	620	720	820		
1 3/8"		322	422	522	622	722	822		
1 1/2"		324	424	524	624	724	824		
1 3/4"						728	828		
2"							832		

The last two figures of the Pt. Nos in the tables denote the length of the rivets in 1/16 inch. the remaining figure or figures denote the diameter in 1/32 inch

Method of calling up on drawing

AS.156 '610

Indicates SN HD rivet dural L37 3/16 dia. x 5/8 long. (i.e. 6/32 x 10/16)

For Strength Figures See Data Sheet No. 11C

For Tubular Rivets See Data Sheet No. 118

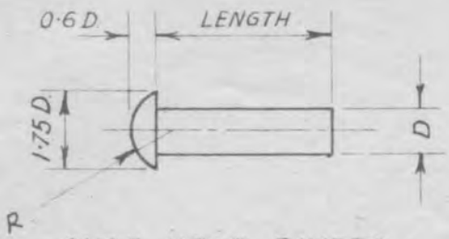
LENGTH (PROUD OF PLATE) REQUIRED TO FORM C'Sk OR SN HD

DIAMETER	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH REQD	08"	12"	16"	19"	23"	27"	31"	39"	47"

DATE 4 9 42	TITLE	STANDARD SOLID RIVETS	ADS 42
DRAWN B.P.M.			
CHECKED [illegible]	ISSUE No 1		COPIED FROM Data Sht No. 11A

THE DE HAVILLAND AIRCRAFT PTY., LTD., AUSTRALIA

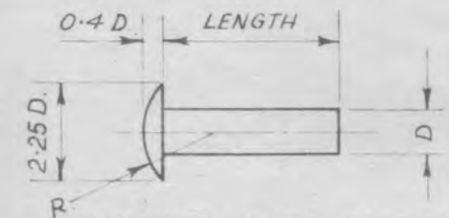
AIRCRAFT DIVISION



SNAP HEAD RIVETS

STD. No.	MATERIAL	SPECN.	TABLE REF
A.S.155	ALUMINIUM	L 36	1
A.S.156	DURALUMIN	L 37	
A.S.157	MAGNESIUM ALLOY	D.T.D. 303	
A.S.455	MILD STEEL	20/32 TONS	
A.S.456	45% NICKEL ALLOY	D.T.D 237 OR D.T.D 268	
A.S.457	MONEL METAL	D.T.D 204 A	
A.S.458	TUNGUM	D.T.D. 367	
A.S.459	COPPER	—	4

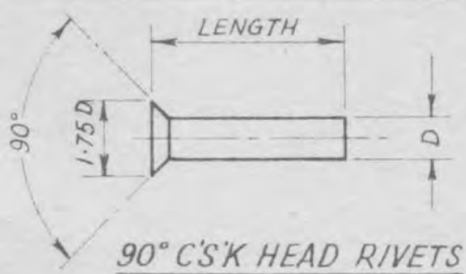
DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	·04"	·06"	·08"	·09"	·11"	·13"	·15"	·19"	·23"
DIA. OF HEAD	·11"	·16"	·22"	·27"	·33"	·38"	·44"	·55"	·66"
APP. RAD. OF HEAD "R"	·06"	·09"	·12"	·15"	·18	·21"	·24"	·29"	·35



MUSHROOM HEAD RIVETS

A.S.158	DURALUMIN	L.37	2
A.S.159	MAGNESIUM ALLOY	D.T.D. 303	

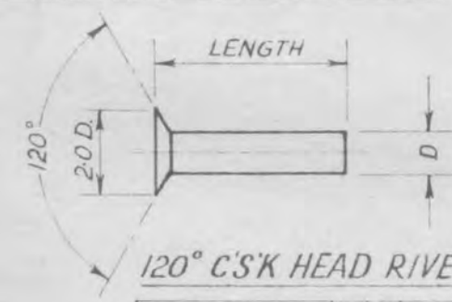
DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	·025"	·038"	·050"	·063	·075	·088"	·100"	·125"	·150"
DIA. OF HEAD	·14"	·21"	·28"	·35"	·42"	·49"	·56"	·70"	·84"
APP. RAD. OF HEAD R	·11"	·17"	·22"	·27"	·33"	·39"	·44"	·55	·66"



90° C'S'K HEAD RIVETS

A.S.160	ALUMINIUM	L.36	4
A.S.161	DURALUMIN	L.37	2
A.S.162	MAGNESIUM ALLOY	D.T.D. 303	
A.S.460	MILD STEEL	20/32 TONS	1
A.S.461	45% NICKEL ALLOY	D.T.D. 268	
A.S.462	MONEL METAL	D.T.D.204A	2
A.S.466	TUNGUM	D.T.D. 367	
A.S.467	COPPER	—	4

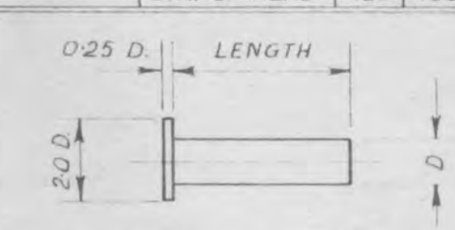
DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	·023"	·035	·047	·059"	·070"	·082"	·094	·117"	·141"
DIA. OF HEAD	·11"	·16"	·22"	·27"	·33"	·38"	·44"	·55"	·66"



120° C'S'K HEAD RIVETS

A.S.163	ALUMINIUM	L.36	4
A.S.164	DURALUMIN	L.37	2
A.S.165	MAGNESIUM ALLOY	D.T.D. 303	
A.S.463	MILD STEEL	20/32 TONS	3
A.S.464	45% NICKEL ALLOY	D.T.D. 268	
A.S.465	MONEL METAL	D.T.D. 204A	
A.S.468	TUNGUM	D.T.D 367	

DIAMETER "D	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
DEPTH OF HEAD	·018"	·027"	·036"	·045	·054"	·063	·072"	·090"	·108
DIA. OF HEAD	·125	·188	·250"	·313"	·375"	·438"	·500"	·625"	·750"



FLAT HEAD RIVETS

A.S.469	COPPER		4

DIAMETER "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
DEPTH OF HEAD	·016"	·023"	·031"	·039"	·047"	·055"	·063"
DIA. OF HEAD	·125"	·188"	·250"	·313"	·375"	·438"	·500"

DATE: 16 10 42

DRAWN: M H

CHECKED

STANDARD SOLID RIVETS

ISSUE NO 1

ADS-42A

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

AIRCRAFT DIVISION

TABLE Nº 1

DIA "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8	202								
3/16	203	303	403						
1/4	204	304	404	504					
5/16	205	305	405	505	605	705			
3/8	206	306	406	506	606	706	806		
7/16	207	307	407	507	607	707	807		
1/2	208	308	408	508	608	708	808	1008	
9/16	209	309	409	509	609	709	809	1009	1209
5/8	210	310	410	510	610	710	810	1010	1210
11/16	211	311	411	511	611	711	811	1011	1211
3/4	212	312	412	512	612	712	812	1012	1212
13/16	213	313	413	513	613	713	813	1013	1213
7/8	214	314	414	514	614	714	814	1014	1214
15/16	215	315	415	515	615	715	815	1015	1215
1	216	316	416	516	616	716	816	1016	1216
1 1/8		318	418	518	618	718	818	1018	1218
1 1/4		320	420	520	620	720	820	1020	1220
1 3/8		322	422	522	622	722	822	1022	1222
1 1/2		324	424	524	624	724	824	1024	1224
1 3/4						728	828	1028	1228
2							832	1032	1232

FOR A.S. 157 ONLY

TABLE Nº 2

DIA "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8	202								
3/16	203	303							
1/4	204	304	404						
5/16	205	305	405	505					
3/8	206	306	406	506	606				
7/16	207	307	407	507	607	707			
1/2	208	308	408	508	608	708	808		
9/16	209	309	409	509	609	709	809		
5/8	210	310	410	510	610	710	810	1010	
11/16	211	311	411	511	611	711	811	1011	
3/4	212	312	412	512	612	712	812	1012	1212
13/16	213	313	413	513	613	713	813	1013	1213
7/8	214	314	414	514	614	714	814	1014	1214
15/16	215	315	415	515	615	715	815	1015	1215
1	216	316	416	516	616	716	816	1016	1216
1 1/8		318	418	518	618	718	818	1018	1218
1 1/4		320	420	520	620	720	820	1020	1220
1 3/8		322	422	522	622	722	822	1022	1222
1 1/2		324	424	524	624	724	824	1024	1224
1 3/4						728	828	1028	1228
2							832	1032	1232

TABLE Nº 3

DIA D	1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8
LENGTH	PART NUMBERS								
1/8	202								
3/16	203	303							
1/4	204	304	404						
5/16	205	305	405	505					
3/8	206	306	406	506	606				
7/16	207	307	407	507	607	707			
1/2	208	308	408	508	608	708	808		
9/16	209	309	409	509	609	709	809		
5/8	210	310	410	510	610	710	810	1010	
11/16	211	311	411	511	611	711	811	1011	
3/4	212	312	412	512	612	712	812	1012	1212
13/16	213	313	413	513	613	713	813	1013	1213
7/8	214	314	414	514	614	714	814	1014	1214
15/16	215	315	415	515	615	715	815	1015	1215
1	216	316	416	516	616	716	816	1016	1216
1 1/8		318	418	518	618	718	818	1018	1218
1 1/4		320	420	520	620	720	820	1020	1220
1 3/8		322	422	522	622	722	822	1022	1222
1 1/2		324	424	524	624	724	824	1024	1224
1 3/4							828	1028	1228
2							832	1032	1232

TABLE Nº 4

DIA "D"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH	PART NUMBERS								
1/8	202								
3/16	203	303	403						
1/4	204	304	404	504					
5/16	205	305	405	505	605				
3/8	206	306	406	506	606	706	806		
7/16	207	307	407	507	607	707	807		
1/2	208	308	408	508	608	708	808		
9/16	209	309	409	509	609	709	809		
5/8	210	310	410	510	610	710	810		
11/16	211	311	411	511	611	711	811		
3/4	212	312	412	512	612	712	812		
13/16	213	313	413	513	613	713	813		
7/8	214	314	414	514	614	714	814		
15/16	215	315	415	515	615	715	815		
1	216	316	416	516	616	716	816		
1 1/8		318	418	518	618	718	818		
1 1/4		320	420	520	620	720	820		
1 3/8		322	422	522	622	722	822		
1 1/2		324	424	524	624	724	824		
1 3/4						728	828		
2							832		

NOS. ABOVE HEAVY LINE ARE FOR A.S. 459 & A.S. 469 ONLY

THE LAST TWO FIGURES OF THE PT NOS IN THE TABLES DENOTE THE LENGTH OF THE RIVETS IN 1/16 INCH THE REMAINING FIGURE OR FIGURES DENOTE THE DIAMETER IN 1/32 INCH

METHOD OF CALLING UP ON DRAWING

A.S. 156 610 — INDICATES SN HD RIVET DURAL L 37 3/16" DIA x 5/8" LONG (i.e. 6/32 x 10/16)

FOR STRENGTH FIGURES SEE DATA SHEET NO. 11C

FOR TUBULAR RIVETS SEE DATA SHEET NO. 11B

LENGTH (PROUD OF PLATE) REQUIRED TO FORM C'SK OR SN HD

DIAMETER	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"
LENGTH REQD	.08	.12	.16	.19	.23	.27	.31	.39	.47

DATE 16.10.42

DRAWN M.H.

CHECKED

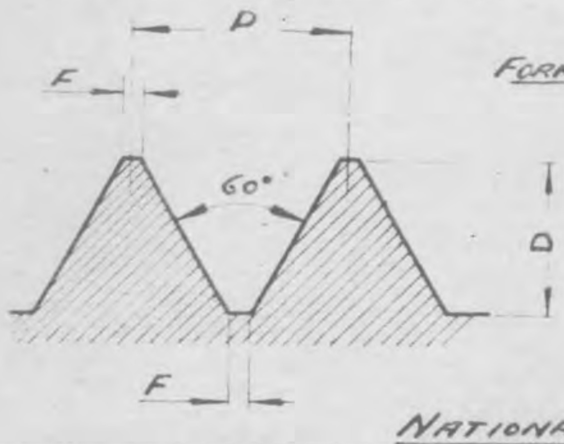
STANDARD SOLID RIVETS

ISSUE NO. 1

ADS 42B

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.

BASIC THREAD DIMENSIONS – AMERICAN NATIONAL FORM



FORMULA.

$P = \text{PITCH} = \dfrac{1}{\text{No. OF THREADS PER INCH}}$

$D = \text{DEPTH} = P \times 0{\cdot}64952$

$F = \text{FLAT} = \dfrac{P}{8}$

NATIONAL FINE

NATIONAL FINE CLASS 3 FIT — SCREWS

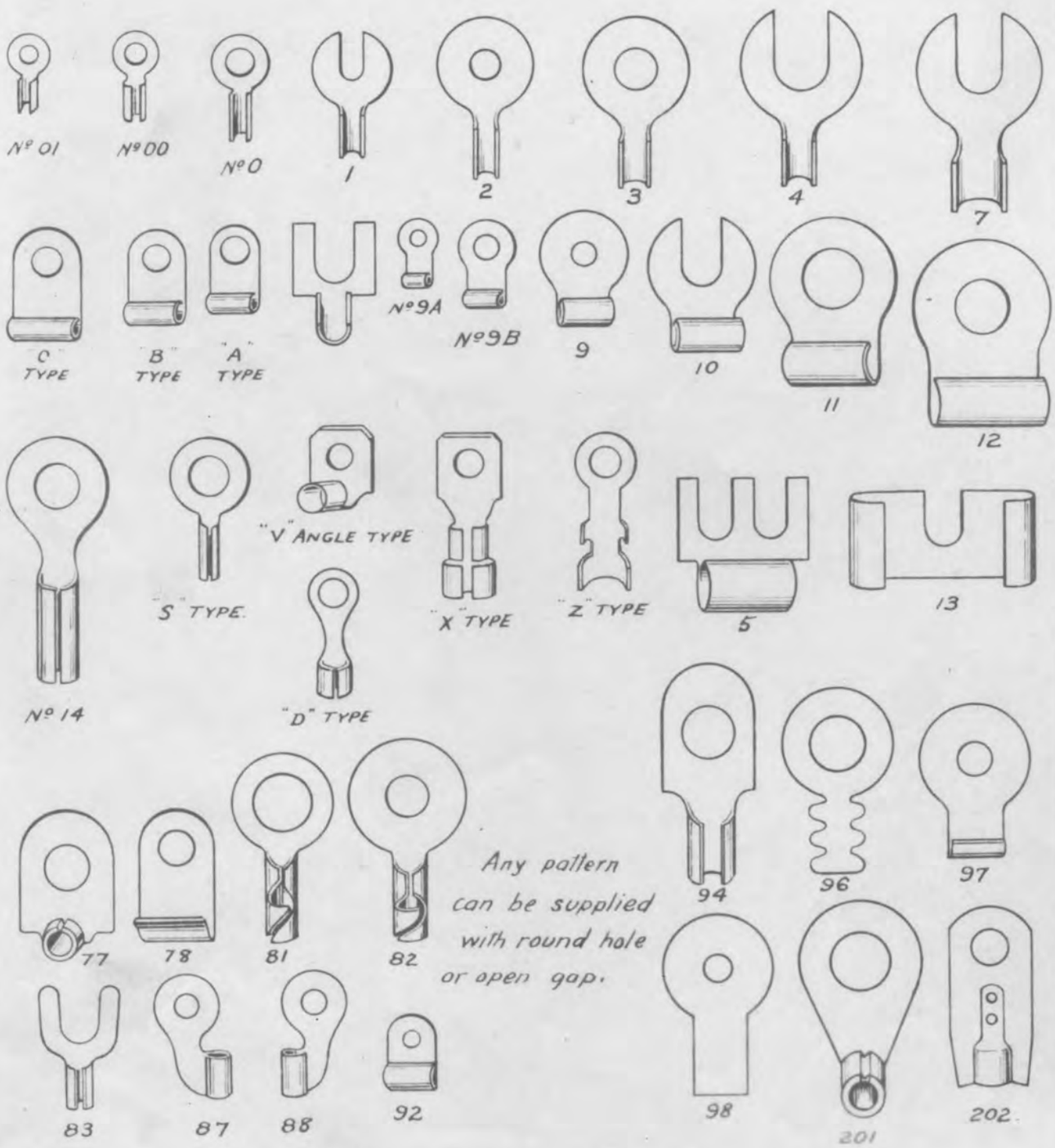
SIZE	THREADS PER INCH	MAJOR DIAMETER (BASIC) MAXIMUM	MAJOR DIAMETER TOLERANCE	MAJOR DIAMETER MINIMUM	PITCH DIAMETER BASIC MAXIMUM	PITCH DIAMETER TOLERANCE	PITCH DIAMETER MINIMUM	MINOR DIA MAXIMUM
6	40	0·1380	0·0048	0·1332	0·1218	0·0017	0·1201	0·1073
8	36	0·1640	0·0050	0·1590	0·1460	0·0018	0·1442	0·1299
10	32	0·1900	0·0054	0·1846	0·1697	0·0019	0·1678	0·1517
12	28	0·2160	0·0062	0·2098	0·1928	0·0022	0·1906	0·1722
1/4"	28	0·2500	0·0062	0·2438	0·2268	0·0022	0·2246	0·2062
5/16"	24	0·3125	0·0066	0·3059	0·2854	0·0024	0·2830	0·2614
3/8"	24	0·3750	0·0066	0·3684	0·3479	0·0024	0·3455	0·3239
7/16"	20	0·4375	0·0072	0·4303	0·4050	0·0026	0·4024	0·3762
1/2"	20	0·5000	0·0072	0·4928	0·4675	0·0026	0·4649	0·4387
9/16"	18	0·5625	0·0082	0·5543	0·5264	0·0030	0·5234	0·4943
5/8"	18	0·6250	0·0082	0·6168	0·5889	0·0030	0·5859	0·5568
3/4"	16	0·7500	0·0090	0·7410	0·7094	0·0032	0·7062	0·6733

NATIONAL FINE – CLASS 3 FIT. — NUTS

SIZE	THREADS PER INCH	MAJOR DIA MINIMUM (BASIC)	PITCH DIAMETER MINIMUM (BASIC)	PITCH DIAMETER TOL	PITCH DIAMETER MAXIMUM	MINOR DIAMETER MINIMUM	MINOR DIAMETER TOL.	MINOR DIAMETER MAXIMUM
6	40	0·1380	0·1218	0·0017	0·1235	0·1109	0·0070	0·1179
8	36	0·1640	0·1460	0·0018	0·1478	0·1339	0·0063	0·1402
10	32	0·1900	0·1697	0·0019	0·1716	0·1562	0·0062	0·1624
12	28	0·2160	0·1928	0·0022	0·1950	0·1773	0·0062	0·1835
1/4	28	0·2500	0·2268	0·0022	0·2290	0·2113	0·0060	0·2173
5/16"	24	0·3125	0·2854	0·0024	0·2878	0·2674	0·0065	0·2739
3/8"	24	0·3750	0·3479	0·0024	0·3503	0·3299	0·0065	0·3364
7/16"	20	0·4375	0·4050	0·0026	0·4076	0·3834	0·0072	0·3906
1/2"	20	0·5000	0·4675	0·0026	0·4701	0·4459	0·0072	0·4531
9/16	18	0·5625	0·5264	0·0030	0·5294	0·5024	0·0076	0·5100
5/8"	18	0·6250	0·5889	0·0030	0·5919	0·5649	0·0076	0·5725
3/4"	16	0·7500	0·7094	0·0032	0·7126	0·6823	0·0080	0·6903

DATE 3·9·42	TITLE AMERICAN NATIONAL FINE THREADS (CLASS 3)	A.D.S 43.
DRAWN R. J. Smith		
CHECKED [illegible]	ISSUE No 1	COPIED FROM [illegible]

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.



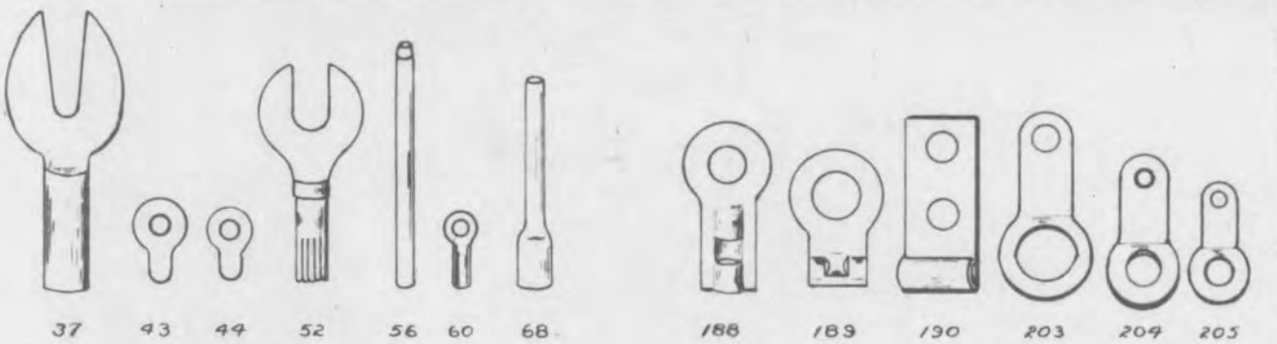
Illustrations are exact size.

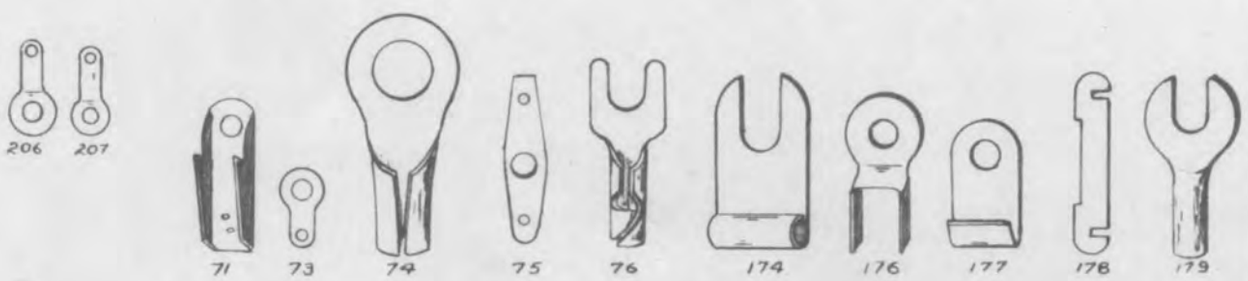
TERMINAL NUMBER	01	00	0	1	2	3	4	5	7	8	9A	9B	9	10	11	12	13	14	A	B	C
SIZE OF BOLT HOLE	1/8"	5/32"	3/16"	3/16"	1/4"	5/16"	5/16"	1/4"	5/16"	1/4"	5/32"	3/16"	3/16"	1/4"	5/16"	5/16"	1/4"	1/4"	3/16"	3/16"	1/4"
DIAS OF FLEX	1/16"	1/16"	1/16"	1/8"	1/8"	5/32"	3/16"	1/4"	9/32"	5/32"	3/32"	3/32"	1/8"	5/32"	3/16"	1/4"	1/8"	5/32"	3/32"	1/8"	1/4"

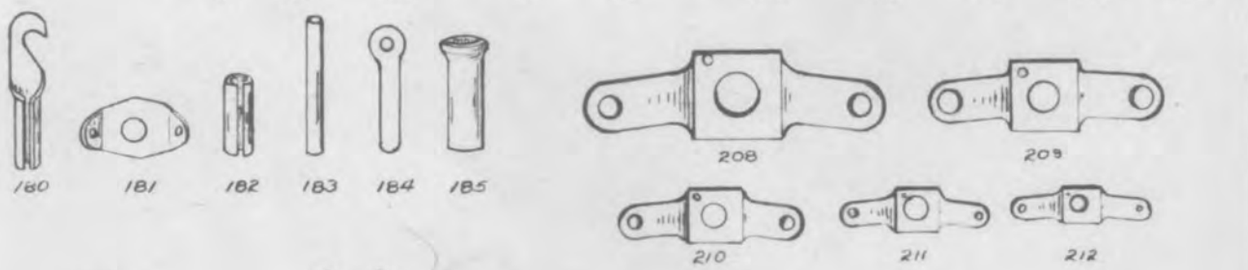
TERMINAL NUMBER	D	S	V	X	Z	77	78	81	82	83	87	88	92	94	96	97	98	201	202
SIZE OF BOLT HOLE	3/16"	3/16 1/4 5/16 or 3/8	3/16"	3/16"	3/16"	1/4"	1/4"	3/8"	1/4"	1/4"	3/16"	3/16"	1/8"	5/16"	5/16"	1/4"	3/16"	3/8"	1/4"
DIAS. OF FLEX	1/8"	1/16"	1/8"	5/32"	5/32"	3/16"	3/16"	5/32"	5/32"	1/8"	1/8"	1/8"	1/8"	3/16"		1/16"		1/4"	3/16"

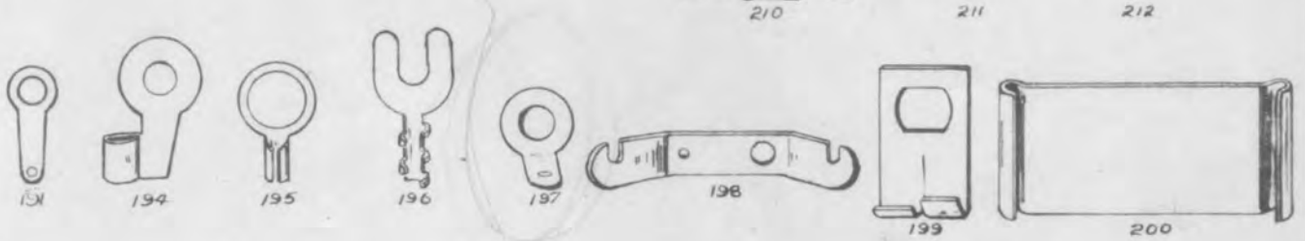
Date: 26 2 43	Title: TINNED COPPER TERMINALS	AOS 44A
Drawn S.L.		
Checked	Issue Nº 1	

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.







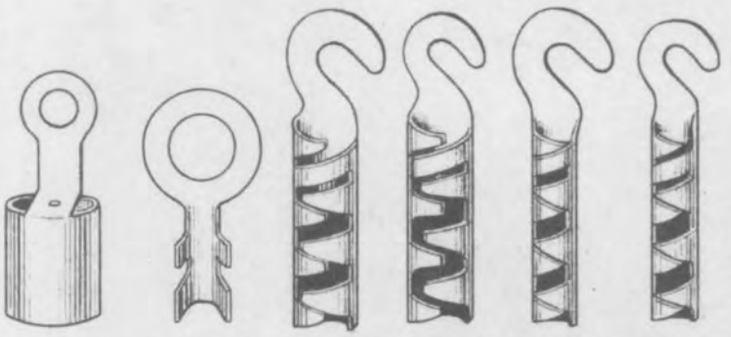


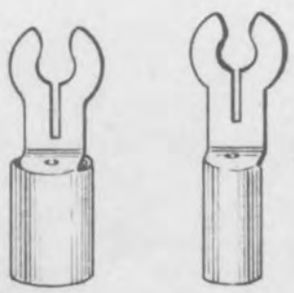
Terminal No	37	37A	43	44	52	56	60	68	71	73	74	75	76	174	176	177	178	179	180	181	182	183	184
Size of Bolt Hole	3/16"	3/16"	1/8"	1/8"	3/16"	—	3/32"	-	1/16"	1/8"	1/4"	1/8"	3/16"	1/4"	3/16"	3/16"	-	3/16"	1/8"	1/16"	—	—	1/16"
Dia of Flex	5/32"	3/16"	—	—	3/32"	1/16"	1/16"	1/16"	-	-	7/32"	-	5/32"	9/64"	1/4 Sq.	-	-	1/8"	1/16"	1/16"	3/32"	1/16"	-

Terminal No	185	188	189	190	191	194	195	196	197	198	199	200	203	204	205	206	207	208	209	210	211	212
Size of Bolt Hole	-	3/16"	3/16"	3/16"	1/8"	3/16"	5/16"	5/32"	3/16"	1/8"	5/16"	-	1/4"	3/16"	5/32"	1/8"	3/32"	1/4"	3/16"	5/32"	1/8"	3/32"
Dia of Flex	5/32"	3/32"	3/32"	5/32"	-	1/8"	1/16"	1/8"	3/32"	1/8"	5/32" : 7/32"	1/8"	5/32"	1/8"	3/32"	1/16"	5/32"	5/32"	5/32"	3/32"	1/16"	1/32"

Date: 25 2 43	Title: TAG TERMINALS	ADS 44B.
Drawn: L A Badman		
Checked: MONTGOMERY	Issue 1	Copied ROSS. From :- COURTNEY CO

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.



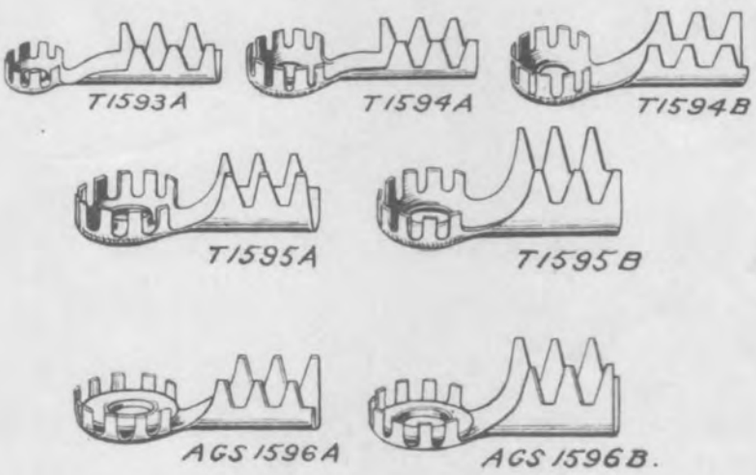


HIGH TENSION

To suit $\frac{3}{16}$" or 5 m/m Bolt
" " $\frac{5}{16}$" or 8 m/m Flex.

LOW TENSION

To suit $\frac{3}{16}$" or 5 m/m Bolt
" " $\frac{3}{16}$" or 5 m/m Flex.



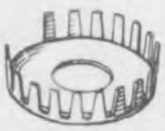
TEMINAL No.	50	95	T1591A	T1591B	T1592A	T1592B	T1593A	T1594A	T1594B	T1595A	T1595B	AGS1596A	AGS1596B
SIZE OF BOLT HOLE	$\frac{3}{16}$"	$\frac{3}{8}$"	$\frac{3}{16}$"	$\frac{5}{32}$"	$\frac{3}{16}$"	$\frac{5}{32}$"	$\frac{1}{8}$"	$\frac{5}{32}$"	$\frac{5}{32}$"	$\frac{3}{16}$"	$\frac{3}{16}$"	$\frac{1}{4}$"	$\frac{1}{4}$"
DIAS. OF FLEX	12 m/m	$\frac{3}{16}$"	$\frac{5}{16}$"	$\frac{5}{16}$"	$\frac{3}{16}$"	$\frac{3}{16}$"	$\frac{5}{32}$"	$\frac{5}{32}$"	$\frac{7}{32}$"	$\frac{7}{32}$"	$\frac{5}{16}$"	$\frac{3}{16}$"	$\frac{5}{16}$"

Date: 26:2.43	Title: WIRE END BRASS TERMINALS	ADS. 44C.
Drawn: S.L.		
Checked	Issue No 1.	Copied: Ross Courtney From. Catalogue

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

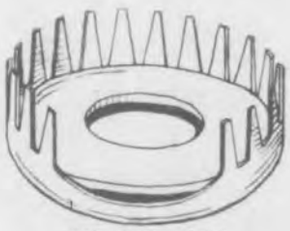
Nº WE.511
With double gap

Nº WE.512
With Lip.



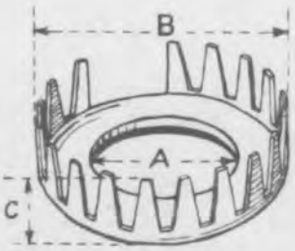
Nº WE.515

Nº WE. 516



Nº WE. 526

Nº WE. 524



Nº WE. 525

Nº WE. 519

Nºs WE.509

WE.507

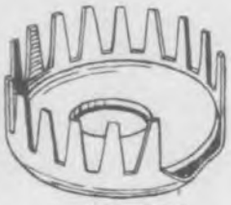
WE. 503

WE. 500

WE. 531

WE.536

WE. 538



WE. 520

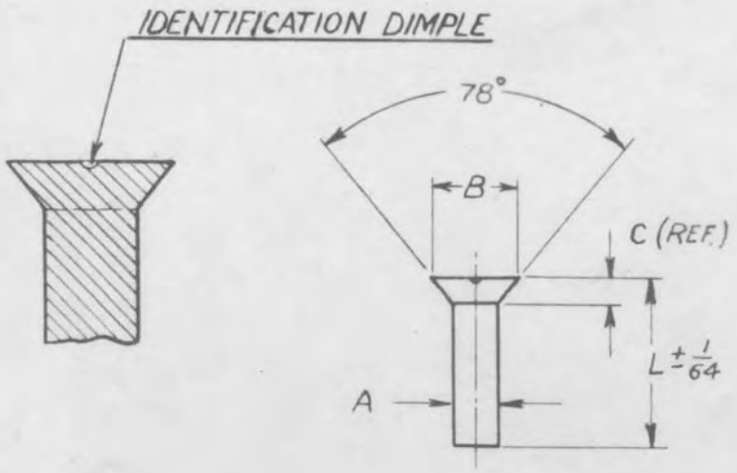
IN BRASS, COMPLETE WITH LOOSE WASHER

Part Nº	A Clearing Hole	B Outside Dia.	C Depth
WE490	5 B.A $\frac{1}{8}$"	$\frac{9}{32}$"	$\frac{9}{64}$"
WE491	4 B.A	8 M/M OR $\frac{5}{16}$"	$\frac{5}{32}$"
WE 500	$\frac{1}{8}$"	$\frac{11}{32}$"	$\frac{5}{32}$"
WE501	4 B.A.	$\frac{11}{32}$"	$\frac{5}{32}$"
WE.502	4 M/M	$\frac{11}{32}$"	$\frac{5}{32}$"
WE.503	$\frac{5}{32}$" OR 4 B.A.	$\frac{13}{32}$"	$\frac{3}{16}$"
WE.504	$\frac{11}{64}$ OR 3 B.A.	$\frac{13}{32}$"	$\frac{3}{16}$"
WE.505	$\frac{3}{16}$ OR 2 B.A.	$\frac{13}{32}$"	$\frac{3}{16}$"
WE.506	0 B.A	$\frac{13}{32}$	$\frac{3}{16}$"
WE.507	$\frac{3}{16}$" OR 2 B.A.	$\frac{1}{2}$"	$\frac{3}{16}$"
WE 508	$\frac{3}{16}$" OR 2 B.A.	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.509	$\frac{1}{4}$" OR 0 B.A.	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.510	1 B.A.	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.511	$\frac{1}{4}$" with double gap.	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.512	$\frac{3}{16}$" with lip	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.513	$\frac{1}{4}$" with lip	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.514	$\frac{5}{16}$" hole	$\frac{5}{8}$"	$\frac{3}{16}$"
WE.515	$\frac{5}{16}$"	$\frac{13}{16}$"	$\frac{9}{32}$"
WE.516	$\frac{3}{8}$"	$\frac{13}{16}$"	$\frac{9}{32}$"
WE.517	$\frac{7}{16}$"	$\frac{13}{16}$"	$\frac{9}{32}$"
WE.518	$\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{5}{16}$"
WE.519	$\frac{1}{2}$"	$\frac{1-3}{16}$"	$\frac{9}{16}$"
WE.520	$\frac{3}{8}$"	$\frac{1-3}{16}$"	$\frac{9}{16}$"

Part Nº	A Clearing Hole	B Outside Dia.	C Depth
WE. 521	$\frac{5}{8}$"	$\frac{1-3}{16}$"	$\frac{9}{16}$"
WE 522	$\frac{1}{2}$"	$\frac{1-13}{32}$"	$\frac{19}{32}$"
WE 523	$\frac{5}{8}$"	$\frac{1-3}{16}$	$\frac{17}{32}$"
WE.524	$\frac{5}{8}$"	$\frac{1-5}{16}$"	$\frac{1}{2}$"
WE.525	$\frac{3}{4}$"	$\frac{1-5}{16}$"	$\frac{1}{2}$"
WE.526	$\frac{5}{8}$"	$\frac{1-17}{32}$"	$\frac{19}{32}$"
WE. 527	$\frac{3}{4}$"	$\frac{1-25}{32}$"	$\frac{5}{8}$"
WE. 528	1"	$\frac{1-25}{32}$	$\frac{5}{8}$"
WE 529	$\frac{5}{8}$"	$\frac{1-25}{32}$"	$\frac{25}{32}$"
WE 530	$\frac{5}{32}$" OR 4 BA.	$\frac{7}{16}$"	$\frac{7}{32}$"
WE 531	$\frac{5}{32}$" OR 4 B.A	$\frac{1}{2}$"	$\frac{1}{4}$"
WE.532	$\frac{3}{16}$" OR 2 B.A.	$\frac{1}{2}$"	$\frac{1}{4}$"
WE. 533	$\frac{7}{32}$" OR 1 B.A.	$\frac{1}{2}$"	$\frac{1}{4}$"
WE. 534	$\frac{1}{4}$" OR 0 B.A.	$\frac{1}{2}$"	$\frac{1}{4}$"
WE. 535	$\frac{3}{16}$" OR 2 B.A.	$\frac{19}{32}$"	$\frac{3}{8}$"
WE. 536	$\frac{1}{4}$" OR 0 B.A	$\frac{11}{16}$"	$\frac{5}{16}$"
WE 537	$\frac{3}{16}$" OR 2 B.A	$\frac{11}{16}$"	$\frac{5}{16}$"
WE. 538	$\frac{5}{16}$"	$\frac{3}{4}$"	$\frac{13}{32}$"
WE 539	$\frac{1}{4}$"	$\frac{3}{4}$"	$\frac{13}{32}$"
WE 540	$\frac{3}{8}$"	$\frac{3}{4}$"	$\frac{13}{32}$"
WE.541	$\frac{7}{16}$"	$\frac{3}{4}$"	$\frac{13}{32}$"
WE 542	$\frac{5}{16}$"	$\frac{29}{32}$"	$\frac{1}{2}$"
WE.543	$\frac{3}{8}$"	$\frac{29}{32}$"	$\frac{1}{2}$"

Date. 25-2-43.	Title: **ROSS COURTNEY TERMINALS**	ADS 44D.
Drawn: M.H.		
Checked: AH	Issue No. 1	Copied from: ROSS COURTNEY & CO LTD.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA



DASH Nº	NOMINAL DIA.	A	B	C
-2	1/16	.066 .059	.123 .101	.031
-3	3/32	.098 .091	.180 .160	.047
-4	1/8	.130 .121	.236 .213	.062
-5	5/32	.161 .152	.292 .272	.078
-6	3/16	.193 .182	.350 .330	.094
-7	7/32	.225 .214	.406 .386	.109
-8	1/4	.258 .244	.462 .442	.125

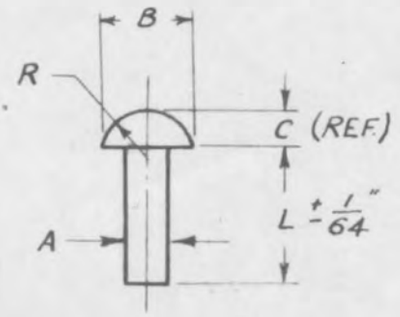
CODE: DIA. TO BE CALLED UP IN 1/32 NDS & LENGTH IN 1/16 THS
THUS B 183-4-6 IS C'SK HEAD ALUM ALLOY RIVET
-1/8 DIA. 3/8 LONG

U.S. ARMY A.C. STANDARD AN 425 AD CONFORMS TO THE REQUIREMENTS OF THIS STANDARD

RIVETS ARE TO BE MANUFACTURED TO SPEC. CA-216

DATE: 25-2-43	TITLE: RIVET B-183 ALUM. ALLOY C'SK HEAD	ADS. 47.
DRAWN: MS		
CHECKED:	ISSUE Nº 1	COPIED FROM: C.A.C. SHT.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA



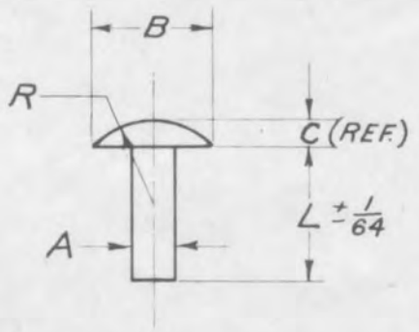
DASH Nº	NOMINAL SIZE	A	B	C	R
-2	1/16	.066 .059	.137 .113	.047	.065
-3	3/32	.098 .091	.205 .169	.070	.098
-4	1/8	.130 .121	.275 .225	.094	.130
-5	5/32	.161 .152	.343 .281	.117	.163
-6	3/16	.193 .182	.412 .338	.140	.195
-7	7/32	.225 .214	.480 .394	.164	.228
-8	1/4	.258 .244	.550 .450	.188	.260

CODE : DIA. TO BE CALLED UP IN 1/32 NDS & LENGTHS IN 1/16 THS

THUS B-187-4-6 IS ROUND HEAD ALUM RIVET

1/8 DIA. 3/8 LONG.

DATE : 25·2·43	TITLE: RIVET B-187 ALUM. ROUND HEAD	ADS 48.
DRAWN: M.S.		
CHECKED:	ISSUE No 1	COPIED FROM :- C.A.C. SHEET



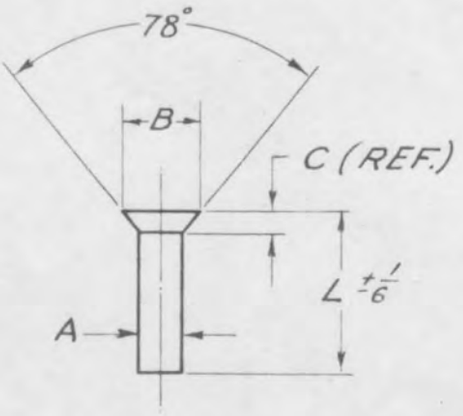
DASH Nº	NOMINAL DIA.	A	B	C	D
-2	1/16	·066 ·059	·171 ·155	·031	·113
-3	3/32	·098 ·091	·258 ·234	·047	·170
-4	1/8	·130 ·121	·343 ·311	·062	·226
-5	5/32	·161 ·152	·430 ·390	·078	·282
-6	3/16	·193 ·182	·514 ·468	·094	·340
-7	7/32	·225 ·214	·601 ·541	·109	·396
-8	1/4	·258 ·244	·687 ·623	·125	·454

CODE : DIA. TO BE CALLED UP IN $\frac{1}{32}$ NOS & LENGTH IN $\frac{1}{16}$ THS.

THUS B 188-4-6 IS BRAZIER HEAD ALUM. RIVET $\frac{1}{8}$ DIA. $\frac{3}{8}$ LONG.

MATERIAL : ALUMINIUM.

Date: 27 2 43.	Title RIVET. B-188 ALUM. BRAZIER HEAD.	ADS 49.
Drawn: S.L.		
Checked:	Issue Nº. 1.	Copied From :- C.A.C. Sheet



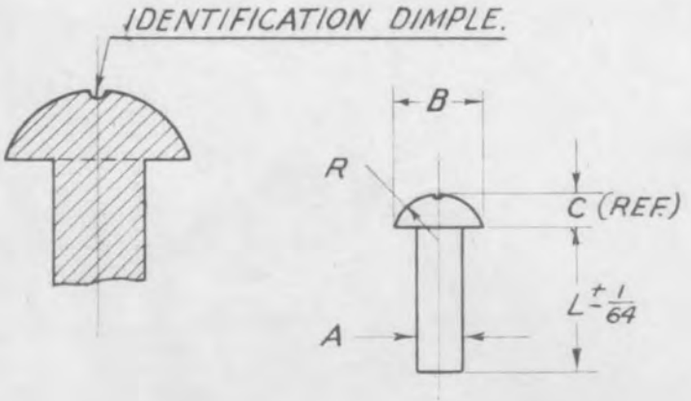
DASH Nº	NOMINAL DIA.	A	B	C
-2	1/16	·066 ·059	·124 ·104	·031
-3	3/32	·098 ·091	·187 ·167	·047
-4	1/8	·130 ·121	·248 ·228	·062
-5	5/32	·161 ·152	·310 ·290	·078
-6	3/16	·193 ·182	·374 ·354	·094
-7	7/32	·225 ·214	·435 ·415	·109
-8	1/4	·258 ·244	·497 ·477	·125

CODE: DIA. TO BE CALLED UP IN 1/32 NOS. & LENGTHS IN 1/16 THS.
THUS B 189-4-6 IS C'SK HEAD ALUM. RIVET.
1/8 DIA. 3/8 LONG.

MATERIAL: ALUMINIUM.

Date: 28-2-43	Title: RIVET. B-189 ALUM. C'SK. HEAD	ADS 50.
Drawn: SL		
Checked:	Issue Nº 1.	Copied:- From C.A.C. Sheet.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.



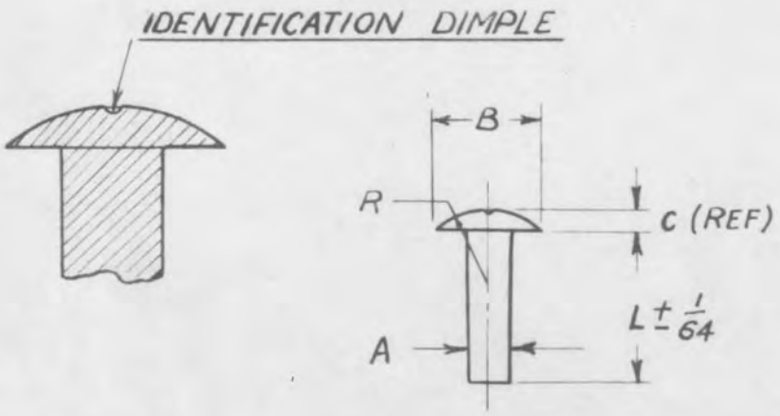
DASH Nº	NOMINAL SIZE	A	B	C	R
-2	1/16	·066 ·059	·137 ·113	·047	·065
-3	3/32	·098 ·091	·205 ·169	·070	·098
-4	1/8	·130 ·121	·275 ·225	·094	·130
-5	5/32	·161 ·152	·343 ·281	·117	·163
-6	3/16	·193 ·182	·412 ·338	·140	·195
-7	7/32	·225 ·214	·480 ·394	·164	·228
-8	1/4	·258 ·244	·550 ·450	·188	·260

CODE : DIA. TO BE CALLED UP IN $\frac{1}{32}$ NOS & LENGTH IN $\frac{1}{16}$ THS.
THUS : B181-4-6 IS ALUM. ALLOY ROUND HEAD RIVET $\frac{1}{8}$ DIA. $\frac{3}{8}$ LONG.
U.S. ARMY AC STANDARD AN-430-AD CONFORMS TO THE REQUIREMENTS OF THIS STANDARD.
RIVETS ARE TO BE MANUFACTURED TO SPEC. CA 216.

MATERIAL : ALUM. ALLOY. SPEC. CA.216.

Date : 23 - 2 - 43	Title: RIVET B-181 ALUM. ALLOY ROUND HEAD.	A.D.S. 51.
Drawn: S.L.		
Checked:	Issue Nº 1.	Copied From :- C.A.C. Sheet.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

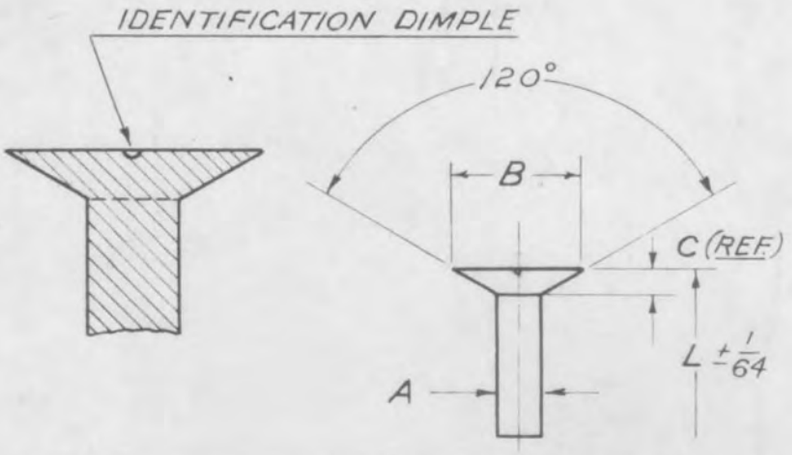


DASH No.	NOMINAL SIZE	A	B	C	R
-2	1/16	.066 .059	.164 .148	.031	.113
-3	3/32	.098 .091	.245 .225	.047	.170
-4	1/8	.130 .121	.322 .302	.062	.226
-5	5/32	.161 .152	.407 .375	.078	.282
-6	3/16	.193 .182	.484 .452	.094	.340
-7	7/32	.225 .214	.572 .522	.109	.396
-8	1/4	.258 .244	.650 .600	.125	.454

CODE: DIA. TO BE CALLED UP IN 1/32 NOS & LENGTH IN 1/16 THS
THUS B 182-4-6 IS BRAZIER HEAD ALUM ALLOY RIVET 1/8 DIA. 3/8 LONG.
U.S. ARMY AC STANDARD AN-455-AD CONFORMS TO THE REQUIREMENTS OF THIS STANDARD
RIVETS ARE TO BE MANUFACTURED TO SPEC. CA-216.

DATE: 25·2·43	TITLE: RIVET - B-182 ALUM ALLOY BRAZIER BAR	ADS. 52.
DRAWN: MS		
CHECKED:	ISSUE NO. 1	COPIED FROM: C.A.C. SHT.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.



DASH No.	NOMINAL DIA.	A	B ± .005	C
-2	1/16	.066 .059	.125	.018
-3	3/32	.098 .091	.187	.027
-4	1/8	.130 .121	.25	.036
-5	5/32	.161 .152	.312	.045
-6	3/16	.193 .182	.375	.054
-7	7/32	.225 .214	.437	.063
-8	1/4	.258 .244	.50	.072

CODE:

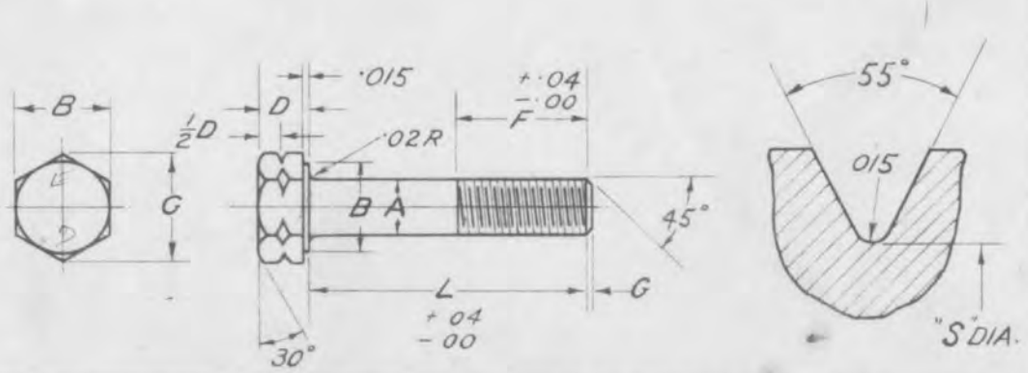
DIA. TO BE CALLED UP IN $\frac{1}{32}$ NDS & LENGTH IN $\frac{1}{16}$ THS
THUS B191-4-6 IS 120° C'SK HEAD ALUM ALLOY. RIVET $\frac{1}{8}$ DIA. $\frac{3}{8}$ LONG.

MATERIAL:

ALUM. ALLOY.
TO BE MANUFACTURED TO SPEC. CA.-216

Date: 25 - 2 - 43	Title: RIVET. B 191. ALUM. ALLOY 120° C'SK. HEAD.	A.D.S. 53.
Drawn: S.L.		
Checked:	Issue No 1.	Copied From - C.A.C. Sheet

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA.



CODE	SIZE	A.	TOLERANCE ON DIA. OF SHANK	WIDTH ACROSS FLATS B		WIDTH ACROSS CORNERS C	THICKNESS D		DEPTH OF CHAMFER G		DIA. S	*F	TENSILE STRENGH LBS.
				MIN	MAX	APPROX MAX	MIN.	MAX.	MIN.	MAX.			
-B	4BA	·142	+·0000 −·0030	·245	·248	·290	·100	·106	·020	·030	·25	·30	1180
-C	2BA	·185	+·00 −·0030	·321	·324	·37	·132	·139	·030	·040	·328	·40	2080
-E	¼BSF	·25	+·00 −·0035	·440	·445	·51	·18	·19	·030	·040	·45	·50	3900
-G	5/16 B.S.F	·3125	+·00 −·0035	·520	·525	·61	·21	22	·030	·040	·53	·55	6250
-J	⅜BSF	·375	+·00 −·0035	·595	·600	·69	·26	·27	·030	·040	·61	·60	9350
-L	7/16 BSF	·4375	+·00 −·0040	·705	·710	·82	·32	·33	·040	·050	·72	·70	13000
-N	½BSF	·5	+·00 −·0040	·815	·820	·95	·37	·38	·040	·050	·83	·80	17050
-P	9/16 BSF	·5625	+·00 −·0040	·915	·920	·106	·43	·44	·040	·050	·94	·90	22500
-Q	⅝BSF	·625	+·00 −·0060	1·002	1·010	1·17	·48	·49	·050	·060	1·03	1·00	27,500
-S	¾BSF	·75	+·00 −·0060	1·192	1·200	1·39	·59	·60	·065	·075	1·23	1·20	40,000
-U	⅞BSF	·875	+·00 −·0080	1·292	1·300	1·50	·65	·66	·065	·075	1·33	1·40	55,600
W	1BSF	1·0	+·00 −·0080	1·468	1·480	1·71	·76	·77	·065	·075	1·53	1·50	73,500

ON BOLTS HAVING A SHANK LENGTH OF ·5 AND LESS THE THREAD LENGTH 'F' SHALL BE SUCH THAT THE PLAIN PORTION INCLUDING IMPERFECT THREAD IS NOT GREATER THAN 0·15"

LENGTH MAY VARY BY 1/10 (OR 0·1)

CODE: B201 - C16 - = 2BA BOLT x 1·6 INS. LONG.

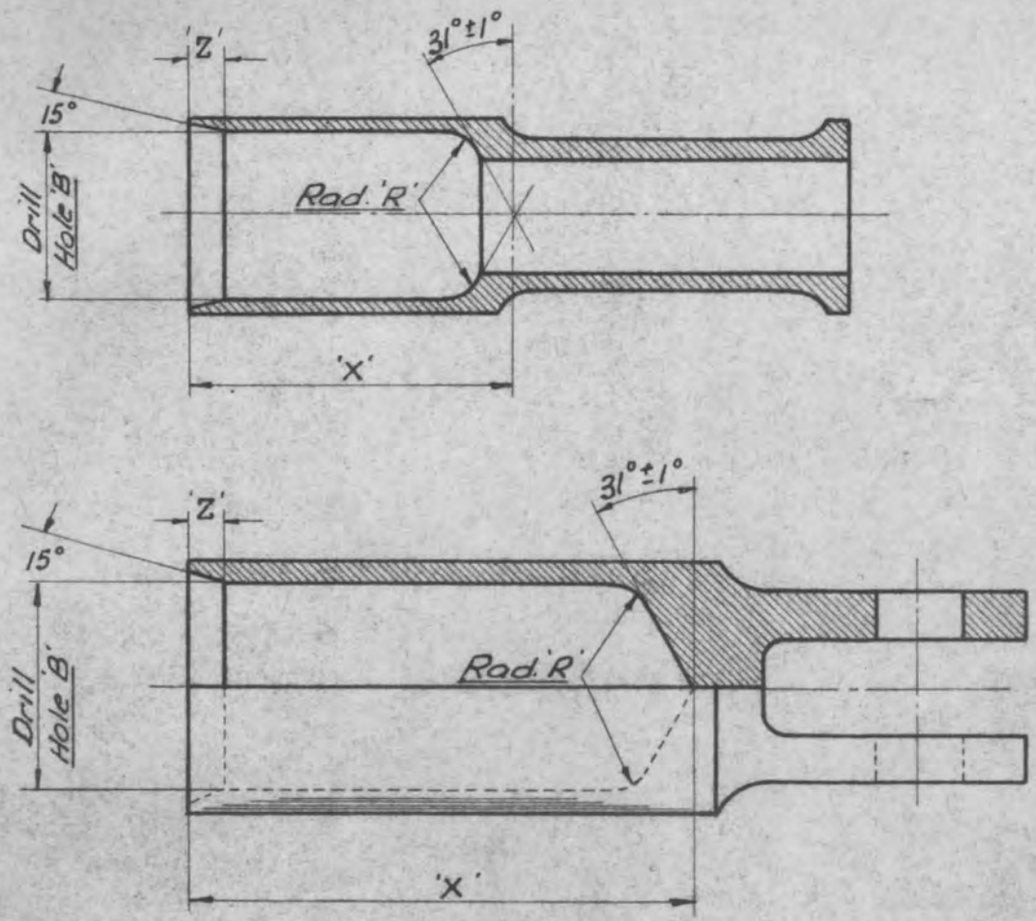
B-201 - J 32 = ⅜ B.S.F. x 3·2 LONG.

FINISH: CADMIUM PLATE FS-10

MATERIAL: H.S. STEEL. SPEC. CA 107-4.

Date: 25 : 2 : 43	Title:	HIGH TENSILE STEEL BOLTS. B-201.	A.D.S. 54.
Drawn: S.L.			
Checked:	Issue No 1.		Copied From: C.A.C. Sheet

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA



DRILL HOLE 'B' -	RADIUS 'R'
1/4" dia	·05"
5/16" "	"
3/8" "	·08"
7/16" "	"
1/2" "	·10"
9/16" "	"
5/8" "	"
11/16" "	·15"
3/4" "	"
13/16" "	"
7/8" "	"
15/16" to 1 7/16" "	·20"
1 1/2" to 2 3/8" "	·25"
2 1/2 dia upwards	·38"

NOTE

Depth of holes governed by dimension 'X' and chamfered by dimension 'Z'.

REDRAWN LS	STANDARD RADIUSED DRILL HOLES FOR PLUG ENDS	ADS.57.
CHECKED HM°M		
DATE 14·7·43	ISSUE 1	

MAXIMUM THICKNESS RIVETED		MANDRELS Metal	BREAK HEAD (B.H.) or BREAK STEM (B.S.) Nickel Alloy (D.T.D. 237)					BREAK HEAD (B.H.) or BREAK STEM (B.S.) Aluminium Alloy (B.S. L46 & D.T.D. 182A)						PULL THROUGH (P.T.) Mild Steel			
			CUP		POP			CUP		POP		Capped		CUP		POP	
All Rivets	Break Stem (Head Retained)	TYPE - Head - CODE -	Dome TNC/D	Csk. TNC/K	Dome TNP/D	Csk. TNP/K		Dome TAC/D	Csk. TAC/K	Dome TAP/D	Csk TAP/K	Cup TAS		Dome TMC/D		Dome TMP/D	
			$\frac{7}{64}$" diameter.														
·05"	·03"	300	314	—	313	—											
·07"	·05"	lbs.	—	314	—	313											
·09"	·07"	failing	320	—	319	—											
·11"	·09"	load	—	320	—	319											
			$\frac{1}{8}$" diameter														
·05"	·03"	420	414	—	413	—	220	415	—	414	—	414					
·07"	·05"	lbs.	417	414	416	413	lbs.	418	—	417	—	417	300	414	240	413	
·08"	·06"	failing	—	—	—	—	failing	—	415	—	414	—	lbs.	—	lbs.	—	
·09"	·07"	load	420	417	419	416	load	421	418	420	417	420	failing	417	Shear	416	
·11"	·09"	"	—	420	—	419	"	—	—	—	—	—	load	—	load	—	
·12"	·10"	"	423	—	422	—	"	424	421	423	420	423	"	420	"	419	
·14"	·12"	"	425	423	424	422	"	—	—	—	—	—	"	—	"	—	
·15"	·13"	"	—	—	—	—	"	—	424	—	423	—	"	423	"	422	
·16"	·14"	"	—	425	—	424	"	—	—	—	—	—	"	—	"	—	
·17"	·15"	"	—	—	—	—	"	—	—	—	—	—	"	425	"	424	
·19"	·17"	"	430	—	429	—	"	430	—	429	—	429	"	—		—	
·21"	·19"	"	—	430	—	429	"	—	—	—	—	—	"	—		—	
·22"	·20"	"					"	—	430	—	429	—	"	430		429	
			$\frac{5}{32}$" diameter														
·05"	·03"	560	516	—	515	—											
·07"	·05"	lbs.	—	516	—	515							360	516	320	515	
·08"	·06"	failing	520	—	519	—	310	519	—	518	—	518	lbs.	—	lbs.	—	
·10"	·08"	load	—	520	—	519	lbs.	—	—	—	—	—	failing	519	Shear	518	
·12"	·10"	"	—	—	—	—	failing	—	519	—	518	—	load	—	load	—	
·13"	·11"	"	—	—	—	—	load	524	—	523	—	523	"	522	"	521	
·14"	·12"	"	525	—	524	—	"	—	—	—	—	—	"	—	"	—	
·16"	·14"	"	—	525	—	524	"	—	—	—	—	—	"	525	"	524	
·17"	·15"	"	528	—	527	—	"	—	524	—	523	—	"	—	"	—	
·19"	·17"	"	—	—	—	—	"	530	—	529	—	—	"	528	"	527	
·20"	·18"	"	531	528	530	527	"	—	—	—	—	—	"	531	"	530	
·23"	·21"	"	—	531	—	530	"	—	530	—	529						
·25"	·23"	"	538	—	537	—	"	538	—	537	—						
·27"	·25"	"	—	538	—	537	"	—	—	—	—						
·29"	·27"	"					"	—	538	—	537						
			$\frac{3}{16}$" diameter.					·2" diameter.									
·09"	·07"	940	622	—	621	—	450	622	—	621	—						
·12"	·10"	lbs.	625	622	624	621	lbs.	626	—	625	—						
·14"	·12"	failing	—	—	—	—	failing	—	622	—	621						
·15"	·13"	load	628	625	627	624	load	—	—	—	—						
·16"	·14"	"	—	—	—	—	"	630	—	629	—						
·17"	·15"	"	631	—	630	—	"	—	—	—	—						
·18"	·16"	"	—	628	—	627	"	—	626	—	625						
·20"	·18"	"	634	631	633	630	"	—	—	—	—						
·21"	·19"	"	—	—	—	—	"	—	630	—	629						
·22"	·20"	"	—	—	—	—	400	636	—	635	—						
·23"	·21"	"	637	634	636	633	"	—	—	—	—						
·25"	·23"	"	640	—	639	—	380	641	—	[illegible]	—						
·26"	·24"	"	—	637	—	636	"	—	—	—	—						
·27"	·25"	"	—	—	—	—	"	—	636	—	635						
·28"	·26"	"	—	640	—	639	"	—	—	—	—						
·30"	·28"	"					"	—	641		640						
·35"	·33"						350	650	—	649	—						
·40"	·38"						"	—	650	—	649						

NOTES

CODE. "T" indicates Tucker
"N" indicates Nickel Alloy
"A" " Aluminium Alloy
"M" " Mild Steel
"C" " Cup Type
"P" " Pop Type.
"D" " Dome Head.
"K" " Countersunk Head
"F" " Flat Head.

For Pop Rivets add "B.H" for Break Head; "B.S." for Break Stem and "P.T" for Pull Through Mandrels.

The diameters are expressed in the first digit, e.g. $3 = \frac{3}{64}$, $4 = \frac{1}{8}$", $5 = \frac{5}{32}$", $6 = \frac{3}{16}$", $8 = \frac{1}{4}$"

The lengths are given in the last two digits, e.g. — $\frac{5}{32}$ dia. X 0·25" long = 525.

All lengths are measured from under the head in all types, including countersunk.

FAILING LOADS are those developed by the rivets in single shear & direct tension.

RIVETING THICKNESS should be reduced by ·020" if mandrel is to be retained.

DRAWN M.H
CHECKED [illegible]
DATE 17-8-43.

TITLE: **CUP & POP RIVETS**
STANDARD SIZES, STRENGTHS & CODE NUMBERS

A.D.S. 58

ISSUE

Copied from Geo. Tucker Eyelet Catalogue

CODE FOR DIAMETER

K – $\frac{1}{8}$"
L – $\frac{5}{32}$"
X – $\frac{3}{16}$"
Z – $\frac{1}{4}$"

CODE FOR LENGTH

By numbers, each of which denotes the length under head in sixteenths of an inch.

CODE FOR HEAD

C – Countersunk
S – Snap Head

CODE FOR MATERIAL

D – Dural (L37)
M – MG5 (DTD303)
NA – 16ST (DTD327)
S – Steel

EXAMPLE – TK3CD

T	K	3	C	D
Taper Bore	$\frac{1}{8}$" Dia.	$\frac{3}{16}$" Long	Countersunk	Dural

Similarly the Code used for Sealing Pins, is, for example :–
K3PD = Pins for TK3CD or TK3SD Rivets.

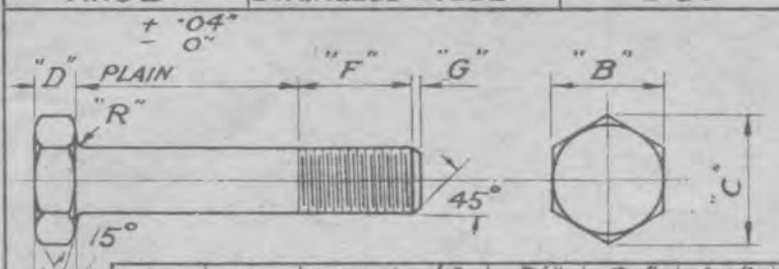
CODE FOR DURAL RIVETS

Countersunk Head	Snap Head	Rivet length under Head	Thickness able to join	S.W.G. Combinations able to join.
TK / TL } 2CD	TK / TL } 2SD	$\frac{1}{8}$" (·125")	from ·025 to ·056	from 30 + 30 to 22 + 22
TK / TL } 3CD	TK / TL } 3SD	$\frac{3}{16}$" (·188")	from ·044 to ·108	from 24 + 24 to 20 + 20 + 20
TK / TL } 4CD	TK / TL } 4SD	$\frac{1}{4}$" (·250")	from ·108 to ·172	from 20 + 20 + 20 to 18 + 18 + 18 + 22
TK / TL } 5CD	TK / TL } 5SD	$\frac{5}{16}$" (·313")	from ·172 to ·240	from 16 + 16 + 18 to 14 + 14 + 14

Rivets in other sizes & for special purposes can be supplied on request.

DRAWN M.H.	TITLE: **TABLE OF SIZES & CODING OF "CHOBERT" RIVETS.** NEW TYPE TAPER BORE. (Patented)	A.D.S. 59
CHECKED M.E.		
DATE 17-8-43	ISSUE. 1	Copied from "Chobert" Catalogue.

PART Nº PREFIX	MATERIAL	SPECIFICATION
A.1.	MILD STEEL	S.1.
A.15Y	HIGH TENSILE STEEL	S.2, S.11 OR D.T.D.153
A.15Z	STAINLESS STEEL	S.80



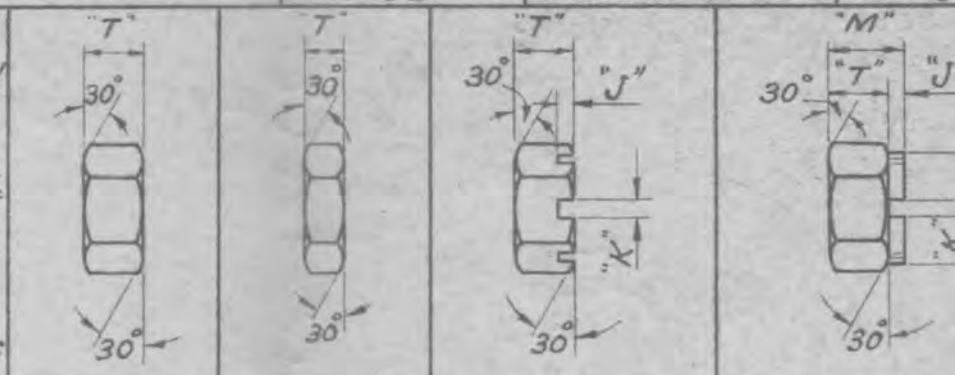
		6 B.A.	4 B.A	2 B.A	1/4" B.S.F.	5/16" B.S.F.	3/8" B.S.F	7/16" B.S.F	1/2" B.S.F.
TOLERANCE ON DIAMETER	A1	+0 −.003"			+0 −.0035"			+0 −.004"	
	A15	= .0005" = .003"						= .0005" = .004"	
	B	.190" .193"	.245" .248"	.321" .324"	.440" .445"	.520" .525	.595" .600"	.705" .710	.815" .820
	C	.22"	.29"	.37"	.51"	.61"	.69	.82"	.95"
	D	.063" .068"	.080" .086"	.106" .113	.14" .15"	.17" .18"	.21" .22"	.26" .27"	.29" .30"
	F	.3"	.35"	.4"	.45"	.5	.6"	.65"	.7"
	G	.015" .020	.020" .030	.030" .040"				.040" .050"	
	R	.02"			.03"				

PLAIN LENGTH	PART NUMBERS.							
.1"	1A	1B	1C	1E	1G			
.2"	2A	2B	2C	2E	2G	2J		
.3"	3A	3B	3C	3E	3G	3J	3L	
.4"	4A	4B	4C	4E	4G	4J	4L	
.5"	5A	5B	5C	5E	5G	5J	5L	5N
.6"	6A	6B	6C	6E	6G	6J	6L	6N
.7"	7A	7B	7C	7E	7G	7J	7L	7N
.8"	8A	8B	8C	8E	8G	8J	8L	8N
9"	9A	9B	9C	9E	9G	9J	9L	9N
1·0"	10A	10B	10C	10E	10G	10J	10L	10N
1·1"	11A	11B	11C	11E	11G	11J	11L	11N
1·2"	12A	12B	12C	12E	12G	12J	12L	12N
1·3"	13A	13B	13C	13E	13G	13J	13L	13N
1·4"	14A	14B	14C	14E	14G	14J	14L	14N
1·5	15A	15B	15C	15E	15G	15J	15L	15N
1·6	16A	16B	16C	16E	16G	16J	16L	16N
1·7	17A	17B	17C	17E	17G	17J	17L	17N
1·8	18A	18B	18C	18E	18G	18J	18L	18N
1·9	19A	19B	19C	19E	19G	19J	19L	19N
2·0	20A	20B	20C	20E	20G	20J	20L	20N
2·1	21A	21B	21C	21E	21G	21J	21L	21N
2·2	22A	22B	22C	22E	22E	22J	22L	22N
2·3	23A	23B	23C	23E	23E	23J	23L	23N
2·4	24A	24B	24C	24E	24G	24J	24L	24N
2·5	25A	25B	25C	25E	25G	25J	25L	25N
2·6	26A	26B	26C	26E	26G	26J	26L	26N
2·7	27A	27B	27C	27E	27G	27J	27L	27N
2·8		28B	28C	28E	28G	28J	28L	28N
2·9		29B	29C	29E	29G	29J	29L	29N
3·0		30B	30C	30E	30G	30J	30L	30N
3·1		31B	31C	31E	31G	31J	31L	31N
3·2		32B	32C	32E	32G	32J	32L	32N
3·3		33B	33C	33E	33G	33J	33L	33N
3·4		34B	34C	34E	34G	34J	34L	34N
3·5		35B	35C	35E	35G	35J	35L	35N
3·6		36B	36C	36E	36G	36J	36L	36N
3·7		37B	37C	37E	37G	37J	37L	37N
3·8		38B	38C	38E	38G	38J	38L	38N
3·9		39B	39C	39E	39G	39J	39L	39N
4·0		40B	40C	40E	40G	40J	40L	40N
4·1		41B	41C	41E	41G	41J	41L	41N
4·2		42B	42C	42E	42G	42J	42L	42N
4·3		43B	43C	43E	43G	43J	43L	43N
4·4		44B	44C	44E	44G	44J	44L	44N
4·5		45B	45C	45E	45G	45J	45L	45N
4·6		46B	46C	46E	46G	46J	46L	46N
4·7		47B	47C	47E	47G	47J	47L	47N
4·8		48B	48C	48E	48G	48J	48L	48N
4·9		49B	49C	49E	49B	49J	49L	49N
5·0		50B	50C	50E	50B	50J	50L	50N
5·1		51B	51C	51E	51B	51J	51L	51N
5·2		52B	52C	52E	52B	52J	52L	52N
5·3		53B	53C	53E	53B	53J	53L	53N
5·4				54E			54L	54N

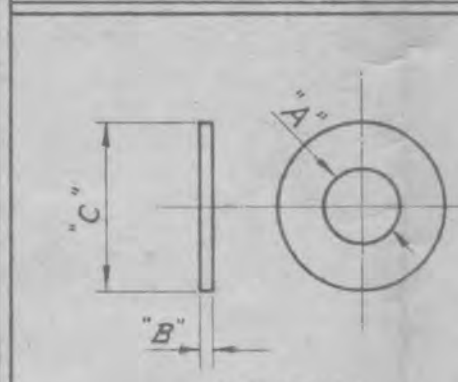
STEEL NUTS.

PART Nº PREFIX	MATERIAL	SPECI
A 16Y	MILD STEEL	S
A 16Z	STAINLESS STEEL	S

HEXAGON SIZES FOR ALL NUTS ARE SAME AS FOR BOLTS.

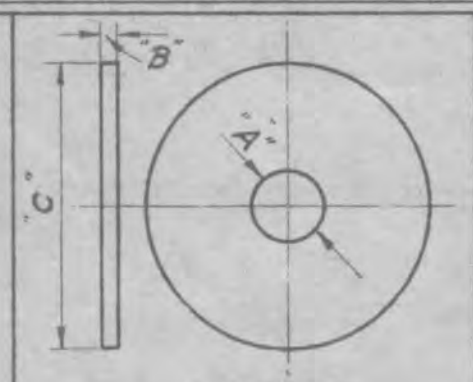


	PLAIN NUTS			THIN NUTS			SLOTTED NUTS				CASTLE NU			
	PART Nº R.H.	PART Nº L.H.	T	PART Nº R.H.	PART Nº L.H.	T	PT Nº	T	J	K	PT Nº	T	J	
6·B.A	AP	APL	.100" .110	AT	ATL	.063" .073								
4 B A	BP	BPL	.132" .142"	BT	BTL	.085" .095"								
2 B A	CP	CPL	.175" .185"	CT	CTL	.113" .123"	CS	.240" .250"	.09"	.08"				
1/4" B.S.F.	EP	EPL	.190" .200"	ET	ETL	.123" .133"	ES	.250" .260"	.09"	.09"	EC	.190" .200"	.09"	
5/16" B.S.F.	GP	GPL	.240" .250"	GT	GTL	.156" .166"	GS	.270" .280"	.09"	.09"	GC	.240" .250"	.09"	
3/8" B.S.F.	JP	JPL	.302" .312	JT	JTL	.198" .208"	JS	.302" .312"	.09"	.09"	JC	.302" .312"	.09"	
7/16" B.S.F.	LP	LPL	.365" .375"	LT	LTL	.240" .250"	LS	.365" .375"	.14"	.125"	LC	.365" .375"	.14"	
1/2" B.S.F.	NP	NPL	.427" .437"	NT	NTL	.281" .291"	NS	.427" .437"	.14"	.125"	NC	.427" .437"	.14"	



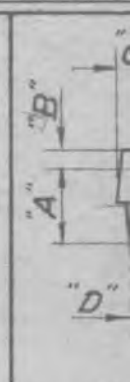
MATERIAL

MILD STEEL – S.21 D.T.D.
STAINLESS STEEL-S.80 OR 146



MATERIAL

MILD STEEL – S.21 D.T.D.
STAINLESS STEEL-S.80 OR 146
ALCLAD – L.38



BOLT SIZE	BRIGHT STEEL WASHERS. PART Nº MILD STEEL	PART Nº STAINLESS STEEL	A +.02" −0	B +.005" −	C ±.05"	WASHERS (LARGE TYPE) PART NUMBER MILD STEEL	PART NUMBER STAINLESS STEEL	PART NUMBER ALCLAD	A +.02" −0	B +.02" −0	C ±.05"	SINGLE PART Nº	A ±
6 B.A.	A.G.S. 160/A	A.G.S. 946/A	.12"	.05"	.3"	A.G.S. 161/A	A.G.S. 947/A	D.H.S. 34/A	.12"	.06"	1"	A.G.S. 162/A	
4 B.A.	A.G.S. 160/B	A.G.S. 946/B	.15"	.05"	.4"	A.G.S. 161/B	A.G.S. 947/B	D.H.S. 34/B	.15"	.06"	1"	A.G.S. 162/B	
2 B.A	A.G.S. 160/C	A.G.S. 946/C	.19"	.05"	.5"	A.G.S. 161/C	A.G.S. 947/C	D.H.S. 34/C	.19"	.06"	1.25"	A.G.S. 162/C	
1/4" B.S.F.	A.G.S. 160/D	A.G.S. 946/D	.26"	.05"	.6"	A.G.S. 161/D	A.G.S. 947/D	D.H.S. 34/D	.26"	.06"	1.25"	A.G.S. 162/D	
5/16" B.S.F.	A.G.S. 160/E	A.G.S. 946/E	.32"	.065"	.75"	A.G.S. 161/E	A.G.S. 947/E	D.H.S. 34/E	.32"	.06"	1.25"	A.G.S. 162/E	
3/8" B.S.F.	A.G.S. 160/F	A.G.S. 946/F	.38"	.065"	.9"	A.G.S. 161/F	A.G.S. 947/F	D.H.S 34/F	.38"	.08"	1.5"	A.G.S. 162/F	
7/16" B.S.F.	A.G.S. 160/G	A.G.S. 946/G	.44"	.065"	1"	A.G.S. 161/G	A.G.S. 947/G	D.H.S 34/G	.44"	.08"	1.5"	A.G.S. 162/G	
1/2" B.S.F.	A.G.S. 160/H	A.G.S. 946/H	.51"	.065"	1.15"	A.G.S. 161/H	A.G.S. 947/H	D.H.S 34/H	.51"	.08"	1.5"	A.G.S 162/H	

METHOD OF CALLING UP ON DRAWING

A.1. 25.E	A.16.Y. E.S.	A.G.S. 160/D	A.G.S. 162/D	A.G.S. 784/3
M.S. BOLT 1/4" B.S.F.	SLOTTED NUT	WASHER	SPRING WASHER	SPLIT PIN

FOR ST
FOR COUNTE
FOR SIZES
SPECIFICATIO

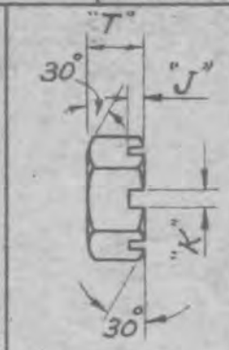
DRAWN S.L.
CHECKED
DATE 2/12/43

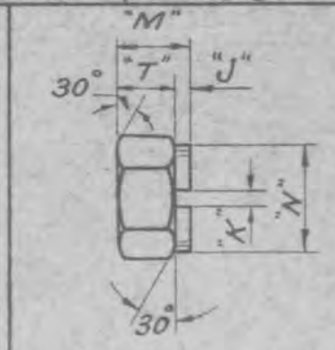
HEXAGON HEAD BOLTS, NUTS, W

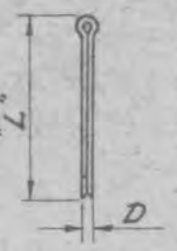
THE DE HAVILLAND AIRCRAFT PTY. LTD.

PART Nº PREFIX	MATERIAL	SPECIFICATION
A 16Y	MILD STEEL	S.I.
A 16Z	STAINLESS STEEL	S 80

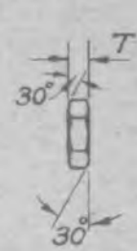
BRASS NUTS SPEC B.13 OR B.S.S. 249 — PART Nº PREFIX A.14



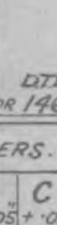


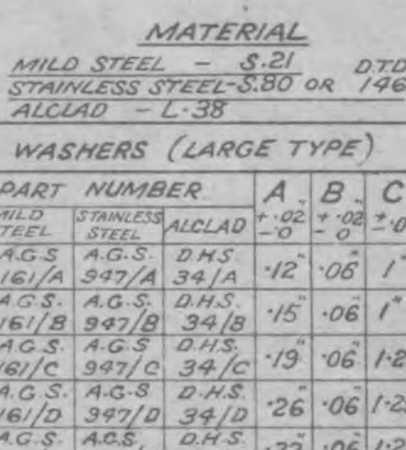


STAINLESS STEEL



NUTS PART Nº L.H.	NUTS T	SLOTTED NUTS PART Nº	SLOTTED NUTS T	SLOTTED NUTS J	SLOTTED NUTS K	CASTLE NUTS PART Nº	CASTLE NUTS T	CASTLE NUTS J	CASTLE NUTS K	CASTLE NUTS M	CASTLE NUTS N	SPLIT PINS PART Nº	SPLIT PINS L	SPLIT PINS D	PLAIN NUTS PART Nº R.H.	PLAIN NUTS PART Nº L.H.	PLAIN NUTS T	THIN NUTS PART Nº R.H.	THIN NUTS PART Nº L.H.	THIN NUTS T
ATL	.063" .073"														6B	6BL	.100" .110"			
BTL	.085" .095"														4B	4BL	.132" .142"	BB	BBL	.08" .09"
CTL	.113" .123"	CS	.240" .250"	.09"	.08"							A.G.S. 784/3	1"	1/16"	2B	2BL	.175" .185"	CB	CBL	.10" .11"
ETL	.123" .133"	ES	.250" .260"	.09"	.09"	EC	.190" .200"	.09"	.09"	.280" .290	.425" .430"	A.G.S. 784/3	1"	1/16"				EB	EBL	.12" .13"
GTL	.156" .166"	GS	.270" .280"	.09"	.09"	GC	.240" .250"	.09"	.09"	.330" .340	.500" .510"	A.G.S. 784/3	1"	1/16"				GB	GBL	.14" .15"
JTL	.198" .208"	JS	.302" .312"	.09"	.09"	JC	.302" .312"	.09"	.09"	.392" .402"	.575" .585"	A.G.S. 784/3	1"	1/16"				JB	JBL	.15" .16"
LTL	.240" .250"	LS	.365" .375"	.14"	.125"	LC	.365" .375"	.14"	.125"	.505" .515"	.685" .695"	A.G.S. 784/12	1 1/4"	3/32"				LB	LBL	.17" .18"
NTL	.281" .291"	NS	.427" .437"	.14"	.125"	NC	.427" .437"	.14"	.125"	.567" .677"	.795" .805"	A.G.S. 784/12	1 1/4"	3/32"				NB	NBL	.19" .20"





MATERIAL
MILD STEEL – S.21
STAINLESS STEEL-S.80 OR 146
ALCLAD – L-38

MATERIAL
SPRING STEEL

MATERIAL
SPRING STEEL

MATERIAL
DURAL – L.1 OR L.3.

DTD. 146

WASHERS (LARGE TYPE)

C ±.05"	PART NUMBER MILD STEEL	PART NUMBER STAINLESS STEEL	PART NUMBER ALCLAD	A +.02 −.0	B +.02 −.0	C ±.05"
.3"	A.G.S. 161/A	A.G.S. 947/A	D.H.S. 34/A	.12"	.06"	1"
.4"	A.G.S. 161/B	A.G.S. 947/B	D.H.S. 34/B	.15"	.06"	1"
.5"	A.G.S. 161/C	A.G.S 947/C	D.H.S. 34/C	.19"	.06"	1.25"
.6"	A.G.S. 161/D	A.G.S 947/D	D.H.S. 34/D	.26"	.06"	1.25"
.75"	A.G.S. 161/E	A.G.S. 947/E	D.H.S. 34/E	.32"	.06"	1.25"
.9"	A.G.S. 161/F	A.G.S. 947/F	D.H.S 34/F	.38"	.08"	1.5"
1"	A.G.S. 161/G	A.G.S. 947/G	D.H.S 34/G	.44"	.08"	1.5"
1.15"	A.G.S. 161/H	A.G.S. 947/H	D.H.S. 34/H	.51"	.08"	1.5"

SINGLE SPRING WASHERS

PART Nº	A ±.01"	B ±.02"	C	D S.W.G
A.G.S. 162/A	.13"	.05"	.125"	18
A.G.S. 162/B	.16"	.06"	.125"	18
A.G.S. 162/C	.20"	.06"	.14"	16
A.G.S. 162/D	.27"	.07"	.16"	16
A.G.S. 162/E	.33"	.07"	.187"	14
A.G.S. 162/F	.39"	.10"	.20"	12
A.G.S. 162/G	.46"	.11"	.20"	12
A.G.S. 162/H	.52"	.12"	.25"	10

SINGLE SPRING WASHERS

PART Nº	A ±.015 −.01	B ±.02 −0	C	D (S.W.G.)
A.G.S. 163/A	.13"	.05"	.125"	20
A.G.S. 163/B	.16"	.06"	.16"	20
A.G.S. 163/C	.20"	.07	.16"	18
A.G.S 163/D	.27"	.08"	.16"	16
A.G.S 163/E	.33	.09"	.187"	16
A.G.S. 163/F	.39"	.10	.187"	15
A.G.S 163/G	.46	.12	.25"	15
A.G.S 163/H	.52	.14	.25"	15

PACKING WASHERS.

PART Nº G = .05"	PART Nº G = .10"	A +.005 +.010"	B +.010 −0
A.S. 470/A	A.S. 471/A	1/8"	.25"
A.S. 470/B	A.S. 471/B	5/32"	.31"
A.S. 470/C	A.S. 471/C	13/64"	.38"
A.S. 470/E	A.S. 471/E	17/64"	.50"
A.S. 470/G	A.S. 471/G	21/64"	.63"
A.S. 470/J	A.S. 471/J	25/64"	.69"
A.S. 470/L	A.S. 471/L	29/64"	.81"
A.S. 470/N	A.S. 471/N	33/64"	.94"

16Y. T.S. | A.G.S. 160/D | A.G.S. 162/D | A.G.S. 784/3

OTTED NUT | WASHER | SPRING WASHER | SPLIT PIN

FOR STRENGTH FIGURES SEE DATA SHEET Nº 9

FOR COUNTERSUNK & ROUNDHEAD BOLTS SEE DATA SHEET Nº 6.

FOR SIZES ABOVE 1/2" B.S.F. REFER TO RESPECTIVE SPECIFICATIONS.

KAGON HEAD BOLTS, NUTS, WASHERS & SPLIT PINS.

ADS 61.

DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA. | ISSUE Nº: 1.

COPIED FROM DATA SHEET Nº 5.

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

IN CALLING UP POLYVINIL TUBE THE INSIDE DIA. IS GIVEN IN MILLIMETERS AND THE LENGTH REQUIRED IN INCHES.

INSIDE DIA.		WALL THICKNESS	Nº UNICELS		Nº DUCELS	
M/M	INCHES		4AMP	7AMP	4AMP	7AMP
1	·039	·015"	—	—	—	—
1½	·059	"	—	—	—	—
2	·079	"	—	—	—	—
2½	·098	"	—	—	—	—
3	·118	·018"	—	—	—	—
3½	·138	"	—	—	—	—
4	·157	·020"	1	1	—	—
5	·197	"	1	1	1	1
6	·236	·025"	2	1	1	1
7	·276	"	3	2	1	1
8	·315	"	*4	3*	2	1
9	·354	·030"	*5	3	2	2
10	·394	"	5	4	3	2
12	·472	"	12	9	*6	5
14	·551	"	*13	10*	6	6*
16	·630	·035"			8	8*
17	·669	"				
18	·709	"				
20	·787	·040"				
22	·866	"				

* CABLES FAIRLY TIGHT FIT.

DATE 6-12-43	TITLE NYLEX POLYVINIL TUBING.	ADS 62
DRAWN S.L.		
CHECKED	ISSUE Nº 1.	COPIED FROM

THE DE HAVILLAND AIRCRAFT PTY LTD AUSTRALIA

COMPARISON TABLE OF BRITISH, AMERICAN & CONTINENTAL STANDARD SCREW THREADS.

GENERAL NOTES:

These thread comparison tables of British, American and Continental standard screw threads are based on diameter and threads per inch. The tables are thus intended for use when the diameter and threads per inch are known and it is desired to find the standard thread system (if any) to which the thread conforms. For details of the individual thread systems see the separate Design Sheets covering same.

The threads shown under the British Standard Whitworth column below $\frac{1}{4}$" are the old Whitworth standard with the exception of 3/16" and 1/8" size (now included in the new British Standards). The particulars of these non-standard sizes are given because many of these small sizes are still in use.

The columns covering U.S.S., S.A.E., and A.S.M.E. are the old standards of American threads, which are still used to some extent. The new American standards, American National Course (N.C.), American National Fine (N.F.), American National Extra Fine (N.E.F.), are American National Pitch Series.

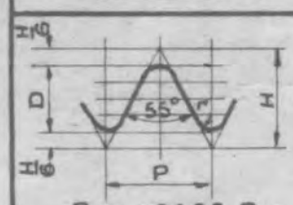
The designating size numbers by which A.S.M.E, N.C., N.F., N.E.F., and B.A. threads are usually specified are given in two separate columns.

The diameters given for B.S.P. taper threads are gauge diameter for Class 1. Diameters given for B.S.P. Parallel Engineering threads are outside diameters for Class 2.

Form details of all the standard thread systems included in these tables are shown below:-

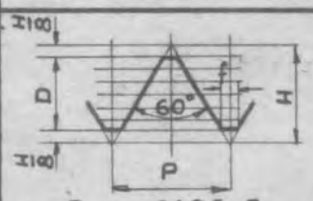
THREAD FORMS

A WHITWORTH



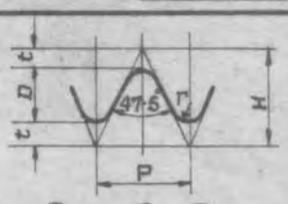
D = ·6403 P
H = ·9605 P
$\frac{H}{6}$ = ·1600 P
r = ·1373 P

B SELLERS OR U.S.S.



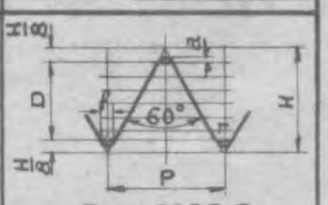
D = ·6495 P
H = ·8660 P
$\frac{H}{6}$ = ·108 P
f = ·125 P = $\frac{P}{8}$

C B.A. BRITISH ASSOCIATION



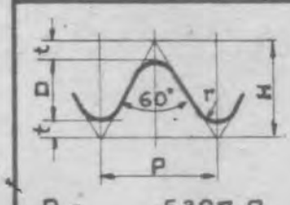
D = ·6 P
H = 1·136 P
t = ·268 P
r = ·182 P

D S.I. SYSTEME INTERNATIONAL



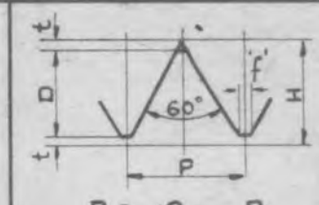
D = ·6495 P
H = ·8660 P
$\frac{H}{6}$ = ·108 P a = ·05 P
f = ·125 P r = ·058 P

E. C.E.I. CYCLE ENGRS INSTITUTE



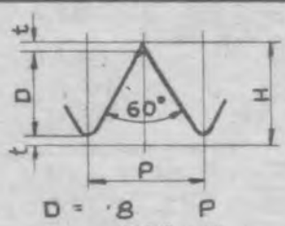
D = ·5327 P
H = ·8660 P
t = $\frac{P}{6}$ = ·166 P
r = $\frac{P}{6}$ = ·166 P

F. VEE. AMERICAN SHARP VEE



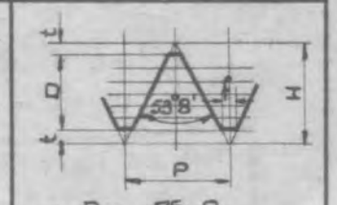
D = ·8 P
H = ·8660 P
t = ·033 P
f = ·04 P

G. BRIGGS PIPE



D = ·8 P
H = ·8660 P
t = ·033 P
TAPER = $\frac{3}{4}$" PER FOOT.

H. LÖWENHERZ

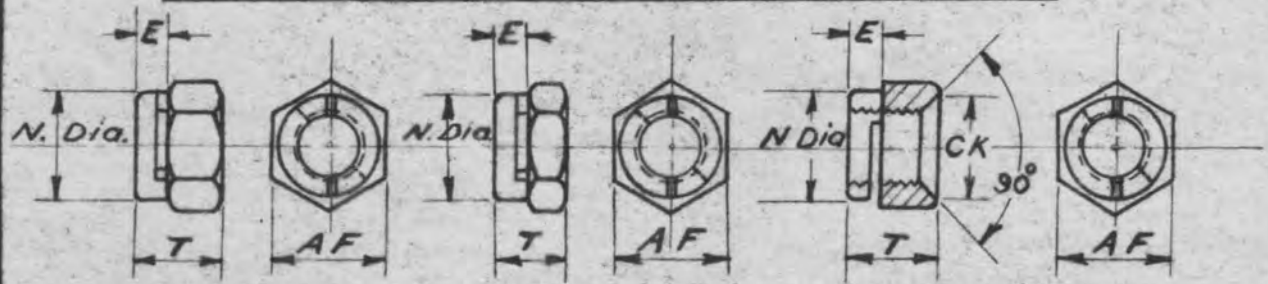


D = ·75 P
H = P
t = $\frac{P}{8}$ = ·125 P
f = $\frac{P}{8}$ = ·125 P

DATE 13·1·44	TITLE COMPARISON TABLE. BRITISH, AMERICAN AND CONTINENTAL STANDARDS SCREW THREADS.	A.D.S. 64
TRACED L.B.		
CHECKED MEN	ISSUE No. 1	REF: TABLE IN BOOK OF COVENTRY DIE HEAD

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

STANDARD "AEROTIGHT" HEX. NUTS.



THICK THIN COUNTERSUNK

SIZE	BASIC PART No. THICK	THIN	C/SK	T	E	N	AF	CK.
6 B.A	A.A.		A.C	·160"	·055"	·180"	·193"	·152"
		A.B		·123"	·055"	·180"	·193"	
4 B.A	B.A		B.C	·208"	·071"	·235"	·248"	·196"
		BB		·161"	·071"	·235"	·248"	
2 B.A	CA		C.C	·272"	·092"	·311"	·324"	·257"
		CB		·210"	·092"	·311"	·324"	
1/4" B.S.F	EA		E.C	·310"	·115"	·430"	·445"	·352"
		EB		·243"	·115"	·430"	·445"	
5/16" B.S.F	GA		G.C	·381"	·136"	·510"	·525"	·416"
		GB		·297"	·136"	·510"	·525"	
3/8" B.S.F	JA		JC	·457"	·150"	·585"	·600"	·476"
		JB		·353"	·150"	·585"	·600"	
7/16" B.S.F	LA		LC	·537"	·167"	·695"	·710"	·564"
		LB		·412"	·167"	·695"	·710"	
1/2" B.S.F	NA		NC	·619"	·187"	·805"	·820"	·652"
		NB		·473"	·187"	·805"	·820"	

MATERIAL DESIGNATION NUMBERS

"Aerotight" Nuts can be supplied in the following materials, each material having a Part No. as indicated.

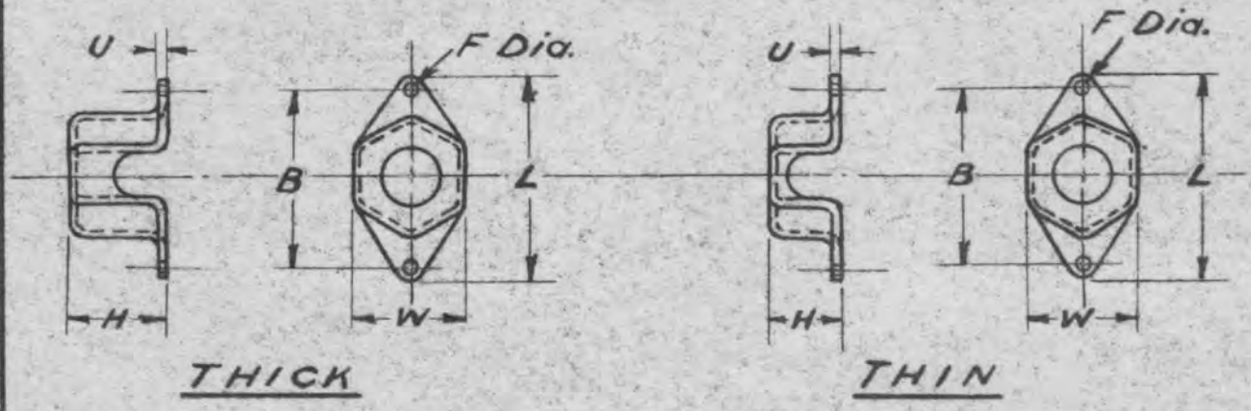
PART No.	MATERIALS	SPECIFICATION
1.	Mild Steel	Nuts 3.S.1 Cadmium Plated
		Plates S.84 Cadmium Plated
2.	Stainless Steel	Nuts S.80 1 Groove in all Sizes 1/4" and over also marked "Z"
		Plates S.85 or Monel D.T.D. 10 B All Sizes marked "Z"
3.	Light Alloy	Nuts S.L.1 Anodised
		Plates S.L.3 or D.T.D.292 Anodised
4	Brass	Nuts 3.B.6 or 3.B.13

To Call Up on Drawing: (Aerotight A.A/1) Refers to 6 B.A. Thick Nut in M.S. 3 S.1

Drawn: ~~G.R.B.~~	"AEROTIGHT" NUTS & ANCHOR PLATES	A.D.S. 70A
Date: 24·5·44		
Checked: McN	Issue No. 1	Copied From: Aeroplane & Motor Fold's Catalogue

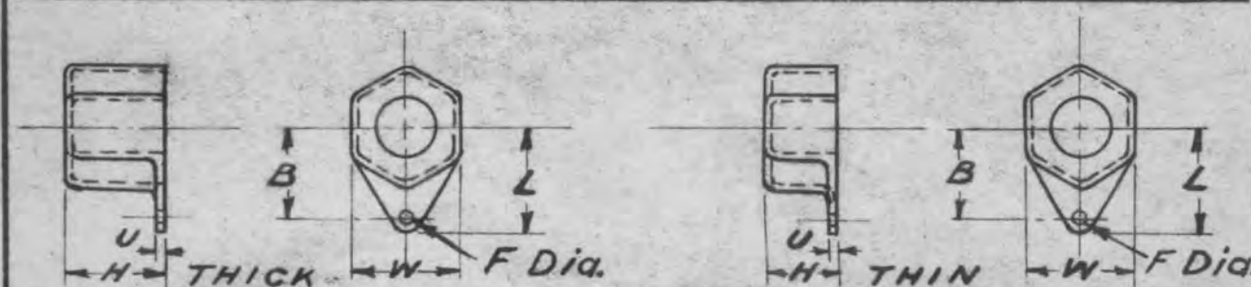
THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

DOUBLE ANCHOR PLATES FOR "AEROTIGHT" HEX. NUTS



SIZE	BASIC PART No. THICK	BASIC PART No. THIN	L	W	H	B	F	U
6BA	A.D.		·68"	·262"	·198"	·50"	·065"	·028"
		AE	·68"	·262"	·161"	·50"	·065"	·028"
4BA	BD		·94"	·317"	·246"	·70"	·096"	·028"
		BE	·94"	·317"	·199"	·70"	·096"	·028"
2BA	CD		·94"	·393"	·310"	·70"	·096"	·028"
		CE	·94"	·393"	·248"	·70"	·096"	·028"
1/4 BSF	ED		1·24"	·516"	·348"	1·00"	·096"	·028"
		EE	1·24"	·516"	·281"	1·00"	·096"	·028"
5/16 BSF	GD		1·35"	·612"	·427"	1·10"	·096"	·036"
		GE	1·35"	·612"	·343"	1·10"	·096"	·036"
3/8 BSF	JD		1·35"	·687"	·503"	1·10"	·096"	·036"
		JE	1·35"	·687"	·399"	1·10"	·096"	·036"
7/16 BSF	LD		1·60"	·802"	·583"	1·25"	·128"	·036"
		LE	1·60"	·802"	·458"	1·25"	·128"	·036"
1/2 BSF	ND		1·75"	·912"	·665"	1·40"	·128"	·036"
		NE	1·75"	·912"	·519"	1·40"	·128"	·036"

SINGLE ANCHOR PLATES FOR "AEROTIGHT" HEX. NUTS



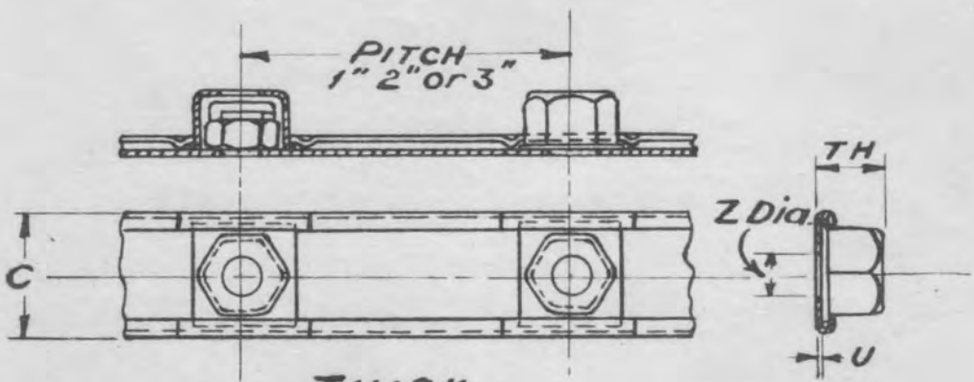
SIZE	BASIC PART No. THICK	BASIC PART No. THIN	L	W	H	B	F	U
6BA	AF		·340"	·262"	·198"	·25"	·065"	·028"
		AG	·340"	·262"	·161"	·25"	·065"	·028"
4BA	BF		·470"	·317"	·246"	·35"	·096"	·028"
		BG	·470"	·317"	·199"	·35"	·096"	·028"
2BA	CF		·470"	·393"	·310"	·35"	·096"	·028"
		CG	·470"	·393"	·248"	·35"	·096"	·028"
1/4 B.S.F.	EF		·620"	·516"	·348"	·50"	·096"	·028"
		EG	·620"	·516"	·281"	·50"	·096"	·028"
5/16 B.S.F.	GF		·675"	·612"	·427"	·55"	·096"	·036"
		GG	·675"	·612"	·343"	·55"	·096"	·036"
3/8 B.S.F.	JF		·675"	·687"	·503"	·55"	·096"	·036"
		JG	·675"	·687"	·399"	·55"	·096"	·036"

To Call Up on Drawing: See A.D.S. 70A

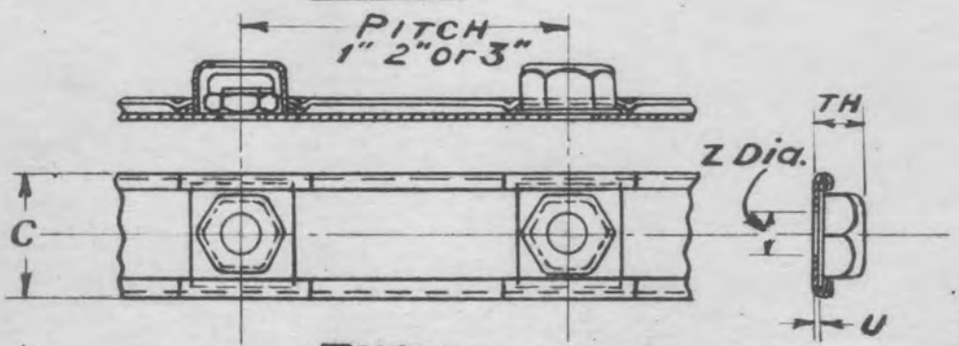
Drawn: GRH	"AEROTIGHT" NUTS & ANCHOR PLATES	A.D.S.70B
Date: 29·5·44		
Checked: MGH	Issue No. 1	Copied From: Bush, Kren & Nettlefold's Catalogue.

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

FLOATING STRIP WITH "AEROTIGHT" HEX. NUTS & HOUSING



THICK



THIN

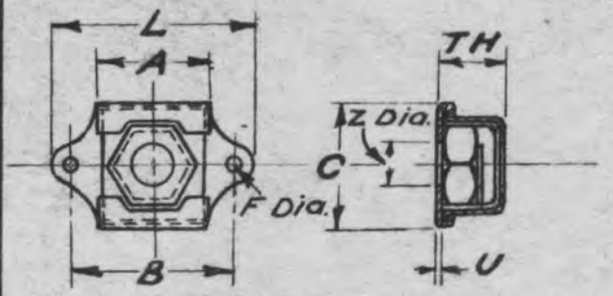
SIZE	BASIC PART No. THICK	BASIC PART No. THIN	C	Z	TH	U
4 B.A.	BH		·600"	11/64"	·284"	·028"
		BJ	·600"	11/64"	·237"	·028"
2 B.A.	CH		·600"	7/32"	·348"	·028"
		CJ	·600"	7/32"	·286"	·028"
1/4" B.S.F.	EH		·750"	9/32"	·386"	·028"
		EJ	·750"	9/32"	·319"	·028"
5/16" B.S.F.	GH		1·000"	11/32"	·473"	·036"
		GJ	1·000"	11/32"	·389"	·036"

To Call Up on Drawing: See A.D.S. 70A.

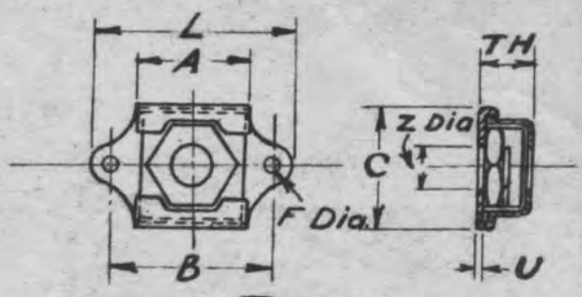
Drawn: GHH.	"AEROTIGHT" NUTS & ANCHOR PLATES	A.D.S. 70C.
Date: 30·5·44		
Checked: MSN	Issue No. 1	Copied From:-

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

FLOATING ANCHORS WITH "AEROTIGHT" HEX. NUTS & HOUSINGS



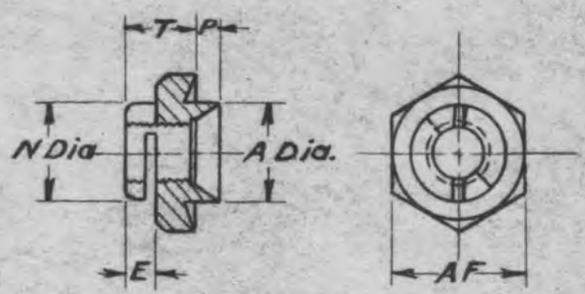
THICK



THIN

SIZE	BASIC PART No. THICK	BASIC PART No. THIN	C	Z	TH	U	A	B	F	L
4 B.A	BK		·600"	11/64"	·284"	·028"	·520"	·700"	·096"	·940"
		BL	·600"	11/64"	·237"	·028	·520"	·700"	·096"	·940"
2 B.A	CK		·600"	7/32"	·348"	·028"	·520"	·700"	·096"	·940"
		CL	·600"	7/32"	·286"	·028"	·520"	·700"	·096"	·940"
1/4" B.S.F	EK		·750"	9/32"	·386"	·028"	·680"	1·000"	·096"	1·240"
		EL	·750"	9/32"	·319"	·028"	·680"	1·000"	·096"	1·240"
5/16" B.S.F	GK.		1·000"	11/32"	·473"	·036"	·805"	1·100"	·096"	1·350"
		GL	1·000"	11/32"	·389"	·036"	·805"	1·100"	·096"	1·350"

"AEROTIGHT" HEX. CLINCH NUTS ("HANK" PATT.)



SIZE	BASIC PART No.	AF	A	P	N	E	T
6 B.A	AM	·280"	·219"	·075"	·180"	·055"	·172"
4 B.A	BM	·324"	·266"	·080"	·235"	·071"	·211"
2 B.A	CM	·413"	·312"	·090"	·311"	·092"	·259"
1/4" B.S.F	EM	·525"	·375"	·105"	·430"	·115"	·311"
5/16" B.S.F	GM	·600"	·500"	·130"	·510"	·136"	·372"
3/8" B.S.F.	JM.	·710"	·625"	·155"	·585"	·150"	·406"

To Call Up on Drawing: See A.D.S. 7.0A.

Drawn: [illegible]	"AEROTIGHT" NUTS & ANCHOR PLATES	A.D.S.70D
Date: 31·5·44		
Checked: MSN	Issue No. 1	Copied From: Guest, Keen & Nettlefolds Catalogue

	DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA	SHEET No. ... OF ...
		REF. No.
		COMPILED
		DATE

SNAP HEAD TYPE 'S' | BRAZIER HD TYPE 'B' | 78° CSK HEAD TYPE 'CN' | 100° CSK HEAD TYPE 'CM' | 120° CSK HD TYPE 'CW' | FLAT HEAD TYPE 'F'

Rivets to Specification (E) D2528-1943 are to be used for all future design and can be used as alternatives where approved on present production. All rivets on future drawings and additional rivets on present drawings, are to be to this specification. For approved alternatives see E.O.I.890 EO1 1315 (Drawer)

The PT. No. to be called upon present drawings is to consist of.

(a) The material code No. denoting the material from which the rivet is made, thus:-

1. ALUMINIUM - SPEC. L.36 ((E) D.632) IDENTIFIED BY BLACK FILM.
2. ALUMINIUM ALLOY (DURAL) DTD. 327 ((E) D.634) IDENTIFIED BY DIMPLE IN HEAD.
3. STEEL. IDENTIFIED BY MAGNETIC QUALITY AND CADMIUM OR SIMILAR COATING.
4. COPPER. IDENTIFIED BY NATURAL COLOUR.

(b) The Type Letter denoting the type of rivet head, thus:-

S - SNAP HEAD.

B.- BRAZIER HEAD.

CN - 78° COUNTERSUNK HEAD. (NOTE: THIS IS FOR PRESENT PRODUCTION ONLY AND IS NOT TO BE USED FOR FUTURE DESIGN)

CM - 100° COUNTERSUNK HEAD.

CW - 120° COUNTERSUNK HEAD.

F - FLAT HEAD.

(c) The size code number denoting the diameter in thirty seconds of an inch and length in sixteenth of an inch, thus:- (SET OUT ON PAGE 2)

DRAWN P.McA	RIVETS TO SPEC^N. (E)D2528-1943	ADS. 71 SHT 1
CHECKED G.A.		
DATE 28-6-44 ISSUE	1	

LENGTH. -IN	DIAMETER. - IN.								
	1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8
1/8	2-2								
3/16	2-3	3-3	4-3						
1/4	2-4	3-4	4-4	5-4	6-4				
5/16	2-5	3-5	4-5	5-5	6-5				
3/8	2-6	3-6	4-6	5-6	6-6	7-6	8-6		
7/16	2-7	3-7	4-7	5-7	6-7	7-7	8-7		
1/2	2-8	3-8	4-8	5-8	6-8	7-8	8-8	10-8	
9/16	2-9	3-9	4-9	5-9	6-9	7-9	8-9	10-9	12-9
5/8	2-10	3-10	4-10	5-10	6-10	7-10	8-10	10-10	12-10
11/16	2-11	3-11	4-11	5-11	6-11	7-11	8-11	10-11	12-11
3/4	2-12	3-12	4-12	5-12	6-12	7-12	8-12	10-12	12-12
13/16	2-13	3-13	4-13	5-13	6-13	7-13	8-13	10-13	12-13
7/8	2-14	3-14	4-14	5-14	6-14	7-14	8-14	10-14	12-14
15/16	2-15	3-15	4-15	5-15	6-15	7-15	8-15	10-15	12-15
1	2-16	3-16	4-16	5-16	6-16	7-16	8-16	10-16	12-16
1 1/8		3-18	4-18	5-18	6-18	7-18	8-18	10-18	12-18
1 1/4		3-20	4-20	5-20	6-20	7-20	8-20	10-20	12-20
1 3/8		3-22	4-22	5-22	6-22	7-22	8-22	10-22	12-22
1 1/2		3-24	4-24	5-24	6-24	7-24	8-24	10-24	12-24
1 3/4						7-28	8-28	10-28	12-28
2							8-32	10-32	12-32

EXAMPLE OF PART NOS:

1 - S - 4 - 8 - Snap Head Alum. 1/8" (dia.) by 1/2" (length)

Sizes for which there are no numbers listed on table shall be denoted by their actual fractional dimensions e.g.,

2 - F - 1/8" x 17/32 - Flat Head Alum. Alloy 1/8" (dia) by 17/32" (length)

JA:VA

DRAWN P.M.A.	RIVETS TO SPEC^N (E) D2528-1943	ADS. 71 SHT 2.
CHECKED [illegible]		
DATE 28-6-44	ISSUE 1	

THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

NOTE :- ALL B.S.P. PARALLEL THREADS TO BE TRUNCATED UNLESS FULL THREADFORM IS CALLED FOR ON COMPONENT DRG.

FOR TAPER PIPE THREADS SEE A.D.S. 73 Sht. 5

NOMINAL DIAMETER	T.P.I.	MALE (BOLT OR EXTERNAL THREAD)					FEMALE (NUT OR INTERNAL THREAD)				
		MAJOR DIAMETER FULL THREADFORM & TOLERANCE	MAJOR DIAMETER TRUNCATED		EFFECTIVE DIAMETER & TOLERANCE	MINOR DIAMETER & TOLERANCE	MAJOR DIAMETER (MIN.)	EFFECTIVE DIAMETER & TOLERANCE	MINOR DIAMETER TRUNCATED		MINOR DIAMETER FULL THREADFORM & TOLERANCE
			DIAMETER	TOLERANCE					DIAMETER	TOLERANCE	
1/8"	28	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 18.	0·3777"	+ ·000 − ·005"	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 18	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 18	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 19	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 19	0·3473"	+ ·005" − ·000"	SEE B.S.I. SPEC. 84 - 1940 TOLERANCE "MEDIUM FIT" TABLE 19
1/4"	19		0·5102"						0·4654"		
3/8"	19		0·6482"						0·6034"		
1/2"	14		0·8144"						0·7536"		
5/8"	14		0·8914"						0·8306"		
3/4"	14		1·0304"						0·9696"		
7/8"	14		1·1784"						1·1176"		
1"	11		1·2956"						1·2181"		
1 1/4"	11		1·6366"						1·5591"		
1 1/2"	11		1·8686"						1·7911"		

Traced :- M.H

Date :- 12·12·44

Checked :- ALEN

ISSUE No. 1

TITLE: TRUNCATED WHITWORTH THREADFORMS B.S.P. PARALLEL THREADS

A.D.S. 73 SHT. 4

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THE DE HAVILLAND AIRCRAFT PTY. LTD. AUSTRALIA

Traced:- M.H.
Date:- 12-12-44
Checked:- MKN

ISSUE No 1

TITLE: TRUNCATED WHITWORTH THREADFORMS
TAPER PIPE THREADS

A.D.S. 73 SHT. 5

COPIED FROM } P.A. 235/5 ISSUE 2

FOR PARALLEL PIPE THREADS SEE A.D.S. 73 Sht. 4

B.S.P. TAPER

B.S.P. TAPER THREADS TO BE TO DIMENSIONS & TOLERANCES CALLED FOR IN B.S. SPEC. 21-1938

BRIGGS

AMERICAN STANDARD TAPER PIPE THREAD FORMERLY KNOWN AS U.S. NATIONAL TAPER PIPE THREAD.

UNLESS OTHERWISE SPECIFIED ON COMPONENT DRAWING, TO BE TO DIMENSIONS CALLED FOR IN "SCREW THREAD STANDARDS FOR THE FEDERAL SERVICES 1942*" AND TO BE GAUGED IN ACCORDANCE WITH SAME TO ± ONE TURN.

* THIS SUPERSEDES "HANDBOOK H.25" & "REPORT OF THE AMERICAN NATIONAL SCREW THREAD COMMISSION 1933."

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA.

B.A. THREADS TO BE TO DIMENSIONS & TOLERANCES CALLED FOR IN B.S. SPEC: 93–1919

OPTIONAL { FULL ADVANTAGE MAY BE TAKEN OF THE EASEMENT PROVIDED BY B.S. WAR EMERGENCY REVISION CF(ME) 6521, DATED AUG. 1940

Traced:- F.E.S.	TITLE:- B.A. THREADS	A.D.S. 73 SHT 6
Date 13-12-44	TRUNCATED WHITWORTH THREADFORMS	
Checked. MSN	ISSUE No. 1	COPIED FROM } P.A. 235/6 ISSUE 2

THE DE HAVILLAND AIRCRAFT PTY. LTD., AUSTRALIA

TRUNCATION

UNLESS OTHERWISE SPECIFIED ON COMPONENT DRAWING, ALL SCREW THREADS OF WHITWORTH THREADFORM AND BASTARD PITCH TO BE TRUNCATED. FORMULA FOR OBTAINING BASIC TRUNCATED DIAMETERS IS GIVEN ON SHEET No 1 OF THIS DRAWING (A.D.S. 73.)

TOLERANCE ON EFFECTIVE DIAMETER

FULL AND TRUNCATED THREADFORMS

SEE B.S. SPEC: 84 – 1940 TOLERANCE:- "MEDIUM FIT" TABLE 24 A.

TOLERANCE ON MAJOR & MINOR DIAMETERS

	MALE BOLT OR EXTERNAL THREAD	FEMALE NUT OR INTERNAL THREAD
TOLERANCE ON MAJOR DIAMETER FULL THREADFORM	SEE B.S. SPEC: 84 – 1940 TOLERANCE: "MEDIUM FIT" TABLE 24 A	B.S. SPEC'S DO NOT GIVE TOLERANCES ON MAJOR DIAMETER FOR FEMALE THREADS. SEE B.S. SPEC: 84 – 1940 PAGE 11, LINES 11-14
TOLERANCE ON TRUNCATED MAJOR DIAMETER MALE THREAD ONLY	+ 0·000" – 0·005"	
TOLERANCE ON MINOR DIAMETER FULL THREADFORM.	SEE B.S. SPEC: 84 – 1940 TOLERANCE: "MEDIUM FIT" TABLE 24 A	
TOLERANCE ON TRUNCATED MINOR DIAMETER FEMALE THREAD ONLY		+ 0·005" – 0·000"

Traced:- F.E.S.	TITLE: WHITWORTH THREADFORMS BASTARD PITCHES	A.D.S.73 SHT. 7
Date:- 13-12-44		
Checked:- MCN	ISSUE No 1	COPIED FROM P.A.235/7 ISSUE 2

DATE 16-1-45 | TITLE AS1885 BOLT, MUSHROOM HEAD | ADS 74

DRAWN R.N.A.

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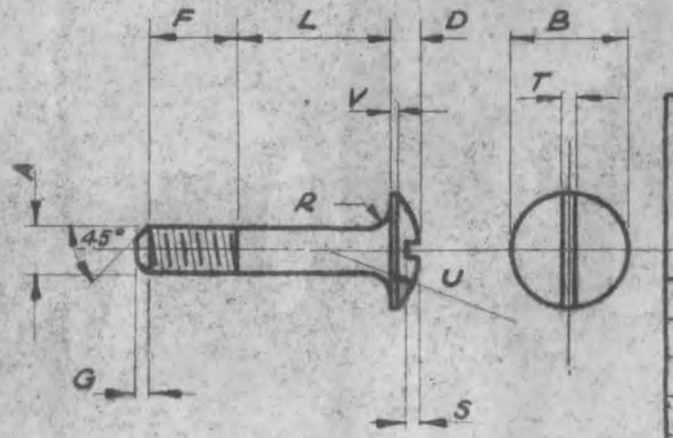


IDENT" LETTER	DIAMETER OF BOLT A	TOLERANCE ON DIA. OF SHANK	LENGTH OF SCREW'D PORTION OF SHANK F	REF. ONLY. THICKNESS D	DIA OF HEAD B	CYL' D' PORTION V	CHAMFER G	SCREW DRIVER SLOT DEPTH S	SCREW DRIVER SLOT WIDTH T	RAD OF DOME U	RAD UNDER HEAD MAX. R
B	4B.A.	+·0" −·003"	·35"	·075"	·375"	·01"	·02"	·05"	·03"	·303"	·02"
C	2 B.A.	+·0" −·003"	·40"	·10"	·4375"	·01"	·03"	·07"	·04"	·311"	·02"
E	1/4" B.S.F.	+·0" −·0035"	·45"	·125"	·625"	·02"	·03"	·09"	05"	·518"	·03"
G	5/16" B.S.F.	+·0" −·0035"	·50"	·18"	·75"	·02"	·03"	·10"	·06"	·520"	·03"

THE PLAIN LENGTH 'L' INCREASES IN ·10" INCREMENTS FROM ·10" TO MAX.N. LENGTHS AS TABULATED, AN ADDITIONAL SHORT BOLT WITH PLAIN LENGTH 'L' = ·05", IS AVAILABLE. THE IDENTIFICATION LENGTH OF THIS BOLT IS 1/2 (NOT ·05") E.G. AS1885-1/2-E

RANGE OF 'L' LENGTHS AVAILABLE									
·05	·10	·2	·3	·4	·5	·6	·7	·8	·9
1·0	1·1	1·2	1·3	1·4	1·5	1·6	1·7	1·8	1·9
2·0	2·1	2·2	2·3	2·4	2·5	2·6	2·7	2·8	2·9
3·0	3·1	3·2	3·3	3·4	3·5	3·6	3·7	3·8	3·9
4·0	4·1	4·2	4·3	4·4	4·5	4·6	4·7	4·8	4·9
5·0	5·1	5·2	5·3	5·4ø					

BOLTS ARE CALLED UP AS FOLLOWS

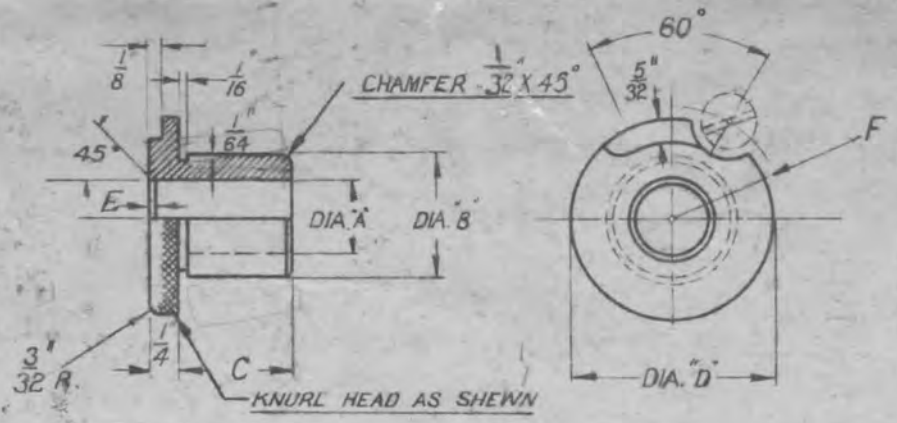
AS 1885 — 4 — C

- AS 1885 — BASIC DRAWING NUMBER
- 4 — PLAN LENGTH AS TABULATED IN TENTHS OF INCHES.
- C — IDENTIFICATION LETTER

ø NOT FOR 4BA OR 2BA.

MAT.L.	M S B	S1
FINISH	CADMIUM	H

A.S.T. 153

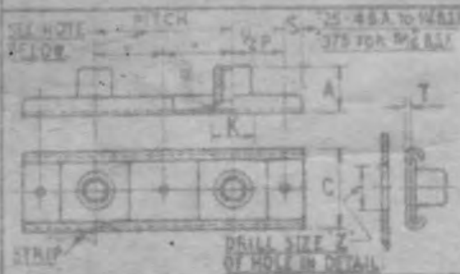


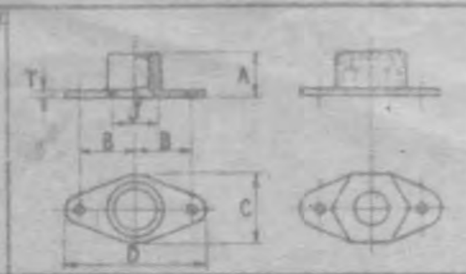
MATERIAL - S.T.D. - Hd. & Gd.

REF. No.	HOLE SIZE DIA. "A" FROM	TO	BODY DIA. "B" NOM.	ACTUAL	LENGTH C ± .010 SHORT	MED.	LONG	HEAD-1/64 DIA. D	WIDTH CHAM. "E"	RADIUS "F"
1	.109	.170	3/8	.3747 +.0000 -.0002	19/32	27/32	1.3/32	1	1/32	41/64
2	.171	.233	7/16	.4372 "	19/32	27/32	1.3/32	1.1/16	1/32	23/32
3	.234	.295	1/2	.4997 "	19/32	27/32	1.3/32	1.1/16	1/16	23/32
4	.296	.358	5/8	.6247 "	19/32	31/32	1.7/32	1.5/16	1/16	53/64
5	.359	.420	11/16	.6872 "	19/32	31/32	1.7/32	1.5/16	1/16	53/64
6	.421	.483	3/4	.7497 "	23/32	31/32	1.7/32	1.7/16	1/16	55/64
7	.484	.545	7/8	.8747 "	23/32	31/32	1.7/32	1.5/8	1/16	61/64
8	.546	.608	15/16	.9372 "	23/32	31/32	1.7/32	1.5/8	1/16	61/64
9	.609	.620	1	.9997 "	23/32	31/32	1.7/32	1.11/16	1/16	63/64
10	.671	.733	1.1/8	1.1246 "	23/32	31/32	1.7/32	1.7/8	1/16	1.5/64
11	.734	.795	1.3/16	1.1871 "	23/32	31/32	1.7/32	1.7/8	1/16	1.5/64
12	.796	.858	1.1/4	1.2496 "	23/32	31/32	1.7/32	2	1/16	1.7/64
13	.859	.920	1.5/16	1.3121 "	23/32	31/32	1.7/32	2	1/16	1.9/64
14	.921	.983	1.3/8	1.3746 "	23/32	31/32	1.7/32	2.1/8	1/16	1.13/64
15	.984	1.045	1.7/16	1.4371 "	23/32	31/32	1.7/32	2.1/8	1/16	1.13/64
16	1.046	1.108	1.1/2	1.4996 "	23/32	31/32	1.7/32	2.1/4	1/16	1.17/64
17	1.109	1.170	1.9/16	1.5621 "	23/32	31/32	1.7/32	2.1/4	1/16	1.17/64
18	1.171	1.233	1.5/8	1.6246 "	23/32	31/32	1.7/32	2.3/8	1/16	1.21/64
19	1.234	1.295	1.11/16	1.6871 "	23/32	31/32	1.7/32	2.3/8	1/16	1.21/64

A Standard Slip Bush Assembly consists of the following four parts 1 Liner Bush, 1 Slip Bush (For Drilling) 1 Slip Bush (For Reaming

THE DE HAVILLAND AIRCRAFT COMPANY LTD. HATFIELD. HERTS.



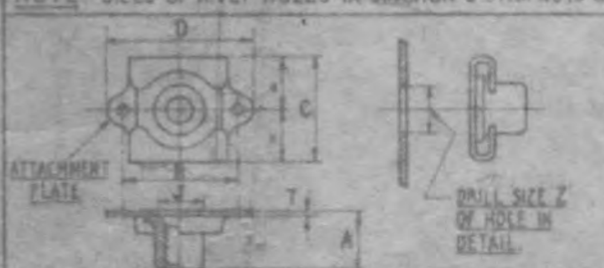


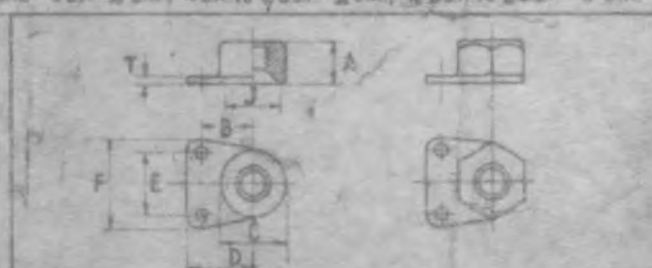
SIZE OF THREAD	STRIP NUTS STANDARD A.G.S. 2015 MARK No	DIM A	THIN A.G.S. 2016 MARK No	DIM A	COUNTERSUNK A.G.S. 2017 MARK No	DIM A	DIA K	COMMON DIMENSIONS C	T	Z	DOUBLE ANCHOR STANDARD A.G.S. 2007 MARK No	DIM A	THIN A.G.S. 2008 MARK No	DIM A	COUNTERSUNK A.G.S. 2009 MARK No	DIM A	DIA J	COMMON DIMENSIONS B	C	D	T
6 BA											A	·241	A	·201	A	·241	·193	·25	·27	·70	·056
4 BA	B	·28	B	·235	B	·28	·172	·60	·028	No 11	B	·284	B	·237	B	·284	·248	·35	·38	·94	·065
2 BA	C	·345	C	·285	C	·345	·734	·60	·028	F	C	·35	C	·29	C	·35	·324	·35	·43	·95	·065
¼ BSF	E	·39	E	·325	E	·39	·312	·765	·028	P	E	·402	E	·335	E	·402	·443	·50	·58	1·32	·072
5/16 BSF	G	·473	G	·375	G	·473	·375	1·02	·036	W	G	·473	G	·397	G	·473	·525	·55	·612	1·42	·072
⅜ BSF											J	·549	J	·445	J	·549	·60	·55	·70	1·42	·082
7/16 BSF											L	·629	L	·504	L	·629	·704	·625	·792	1·65	·082
½ BSF											N	·721	N	·565	N	·721	·818	·70	·912	1·80	·082
9/16 BSF																					
⅝ BSF																					

PITCH 4BA & 2BA — ·8, 1", 2", 3"
¼" BSF & 5/16 BSF — 1", 2", 3"

HEXAGON STANDARD A.G.S. 2001 MARK No	DIM A	THIN A.G.S. 2002 MARK No	DIM A	COUNTERSUNK A.G.S. 2003 MARK No	DIM A	DIA K	SIZE OF THREAD
A	·176	A	·151	A	·176	·152	6 BA
B	·217	B	·169	B	·217	·196	4 BA
C	·25	C	·218	C	·25	·257	2 BA
E	·34	E	·251	E	·34	·362	¼ BSF
G	·40	G	·305	G	·40	·416	5/16 BSF
J	·49	J	·361	J	·49	·476	⅜ BSF
L	·555	L	·42	L	·585	·564	7/16 BSF
N	·665	N	·481	N	·665	·652	½ BSF
Q	·739	Q	·552				9/16 BSF
S	·961	S	·711				⅝ BSF

NOTE: SIZES OF RIVET HOLES IN ANCHOR & STRIPNUTS ARE – 6 BA – 1/16" DIA., 4BA TO ¼ B.S.F. – 3/32" DIA., 5/16 B.S.F. TO ½ B.S.F. – ⅛" DIA.





SIZE OF THREAD	FLOATING ANCHOR STANDARD A.G.S. 2012 MARK No	DIM A	THIN A.G.S. 2013 MARK No	DIM A	COUNTERSUNK A.G.S. 2014 MARK No	DIM A	DIA J	COMMON DIMENSIONS B	C	D	T	DRILL SIZE Z
6 BA	A	·23	A	·20	A	·23	·14	·50	·432	·70	·036	No 21
4 BA	B	·284	B	·24	B	·284	·187	·70	·605	·95	·036	No 11
2 BA	C	·35	C	·29	C	·35	·225	·70	·605	·95	·036	F
¼ BSF	E	·394	E	·327	E	·394	·305	1·00	·776	1·315	·036	P
5/16 BSF	G	·473	G	·39	G	·473	·360	1·10	1·02	1·42	·036	W
⅜ BSF			J	·39	J	·490	·420	1·20	1·115	[illegible]	·048	25/64
7/16 BSF												
½ BSF												

SINGLE ANCHOR STANDARD A.G.S. 2018 MARK No	DIM A	THIN A.G.S. 2019 MARK No	DIM A	COUNTERSUNK A.G.S. 2020 MARK No	DIM A	DIA J	COMMON DIMENSIONS B	C	D	E	F	T	SIZE OF THREAD
A	·241	A	·201	A	·241	·193	·25	·284	·35	·19	·37	·056	6 BA
B	·284	B	·237	B	·284	·248	·35	·38	·475	·25	·49	·065	4 BA
C	·35	C	·29	C	·35	·324	·35	·43	·475	·30	·54	·065	2 BA
E	·402	E	·335	E	·402	·443	·50	·58	·66	·46	·72	·072	¼ BSF
G	·473	G	·397	G	·473	·525	·55	·632	·71	·57	·82	·072	5/16 BSF
J	·549	J	·445	J	·549	·60	·55	·708	·71	·66	·91	·082	⅜ BSF
L	·623	L	·504	L	·629	·704	·625	·818	·825	·70	1·05	·082	7/16 BSF
N	·721	N	·565	N	·721	·818	·70	·928	·90	·84	1·19	·082	½ BSF

METHOD OF CALLING UP

THE A.G.S. PART No COVER ALL TYPES OF PROPRIETARY STIFFNUTS APPROVED TO R.A.E. SPECIFICATION AD.114 AND DIMENSIONS QUOTED COVER THE MAXIMUM DIMENSIONS TO ALLOW REPLACEMENT BY ANY MAKE OF NUT.

ALL ANCHOR NUTS ARE INTEGRAL PARTS e.g. CAGE & NUT FIXED TOGETHER & MADE FROM SIMILAR MATERIAL. STEEL NUT - STEEL CAGE, LIGHT ALLOY NUT - LIGHT ALLOY CAGE.

FOR PLAIN OR ANCHOR NUTS ONE MATERIAL REFERENCE ONLY IS REQUIRED AS GIVEN IN TABLE BELOW.

IN THE CASE OF FLOATING ANCHOR OR STRIP NUTS, MILD STEEL ATTACHMENT PLATES OR STRIP ONLY IS TO BE CALLED UP IN WHICH CASE AN ADDITIONAL FIG. 1 IS ADDED TO THE MATERIAL CODE.

MILD STEEL OR LIGHT ALLOY NUTS SHOULD ONLY BE USED UNLESS OTHER MATERIALS ARE SPECIALLY REQUIRED. N.B. LIGHT ALLOY IS SUITABLE FOR ANTI-MAGNETIC REQUIREMENTS.

SUFFIX No	MATERIAL	SPEC OF CAGE	SPEC. OF NUT	FINISH
1	MILD STEEL	S.3. OR S.84	D.T.D. 650	CADMIUM
2	NON CORRODIBLE STEEL OR MONEL	S.65 OR D.T.D. [illegible]	S.80	——
3	LIGHT ALLOY	D.T.D. 182	[illegible] OR 364	ANODIC
4	BRASS	B.S. 409	[illegible] & 230	CADMIUM

EXAMPLE

BASIC A.G.S. No OF STIFFNUTS	MARK No FOR SIZE	SUFFIX No FOR MAT'L OF STRIP OR ATTACHMENT PLATE	SUFFIX No FOR ONE PIECE NUT OR INTEGRAL NUT & CAGE	PITCH DIM'N & No OF PITCHES
STANDARD A.G.S. 2001	E		1 OR 3	
ANCHOR A.G.S. 2007	E	-	1 OR 3	
FLOATING ANCHOR A.G.S. 2012	E	1	1 OR 3	
STRIP A.G.S. 2015	E	1	1 OR 3	2" PITCH 25

NOTE: A.G.S. 2015/E/1/1/2" PITCH/25 WILL INCLUDE THE END ½ PITCH + 2 × DIM 'S' × 2 MAKING TOTAL LENGTH OF 25×2" PITCHES + 52...

RESTRICTION IN THE USE OF STIFFNUTS

1. STIFFNUTS MUST NOT BE USED IN APPLICATIONS SUCH THAT ANY LOOSENING OF ONE NUT, SUFFICIENT TO REMOVE ALL TENSION FROM THE BOLT, MIGHT CAUSE –
(a) STRUCTURAL COLLAPSE (b) LOSS OF CONTROL (c) FAILURE OF MOTIVE POWER
(d) UNINTENTIONAL RELEASE OR INABILITY TO RELEASE ARMAMENT STORE i.e. GUNS, BOMBS (e) UNINTENTIONAL OPERATION OR INABILITY TO OPERATE UNDERCARRIAGE OR FLAPS.
2. WHERE THERE IS ROTATION THAT WOULD TEND TO LOOSEN THE NUT.

ISSUE No	DATE
2	AUG 49

DRAWN: [illegible] SPENCER
TRACED: DOLTON DWG. Co. 24 6 1949
APPROVED

A.G.S. STIFFNUTS

A...

= 52 1/2"
[NC, Feb 2013]