

AD 608189

U. S. A R M Y
TRANSPORTATION RESEARCH COMMAND
FORT EUSTIS, VIRGINIA

SUPPLEMENT
to
TRECOM TECHNICAL REPORT 63-81

CRASH INJURY EVALUATION
PERSONNEL RESTRAINT SYSTEMS STUDY
UH-1A AND UH-1B BELL IROQUOIS HELICOPTERS

Contract DA 44-177-AMC-888(T)

March 1964

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prepared by:

AVIATION SAFETY ENGINEERING AND RESEARCH
Phoenix, Arizona

A Division Of
Flight Safety Foundation, Inc.
New York, New York

DDC
NOV 10 1964
DDC-IRA B



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* * *

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Task 1A024701A12101
Contract DA 44-177-AMC-888(T)
TRECOM Technical Report 63-81
March 1964

SUPPLEMENT
to
PERSONNEL RESTRAINT SYSTEMS STUDY
UH-1A AND UH-1B BELL IROQUOIS HELICOPTERS

Crash Injury Evaluation
AvSER 62-27

Prepared by
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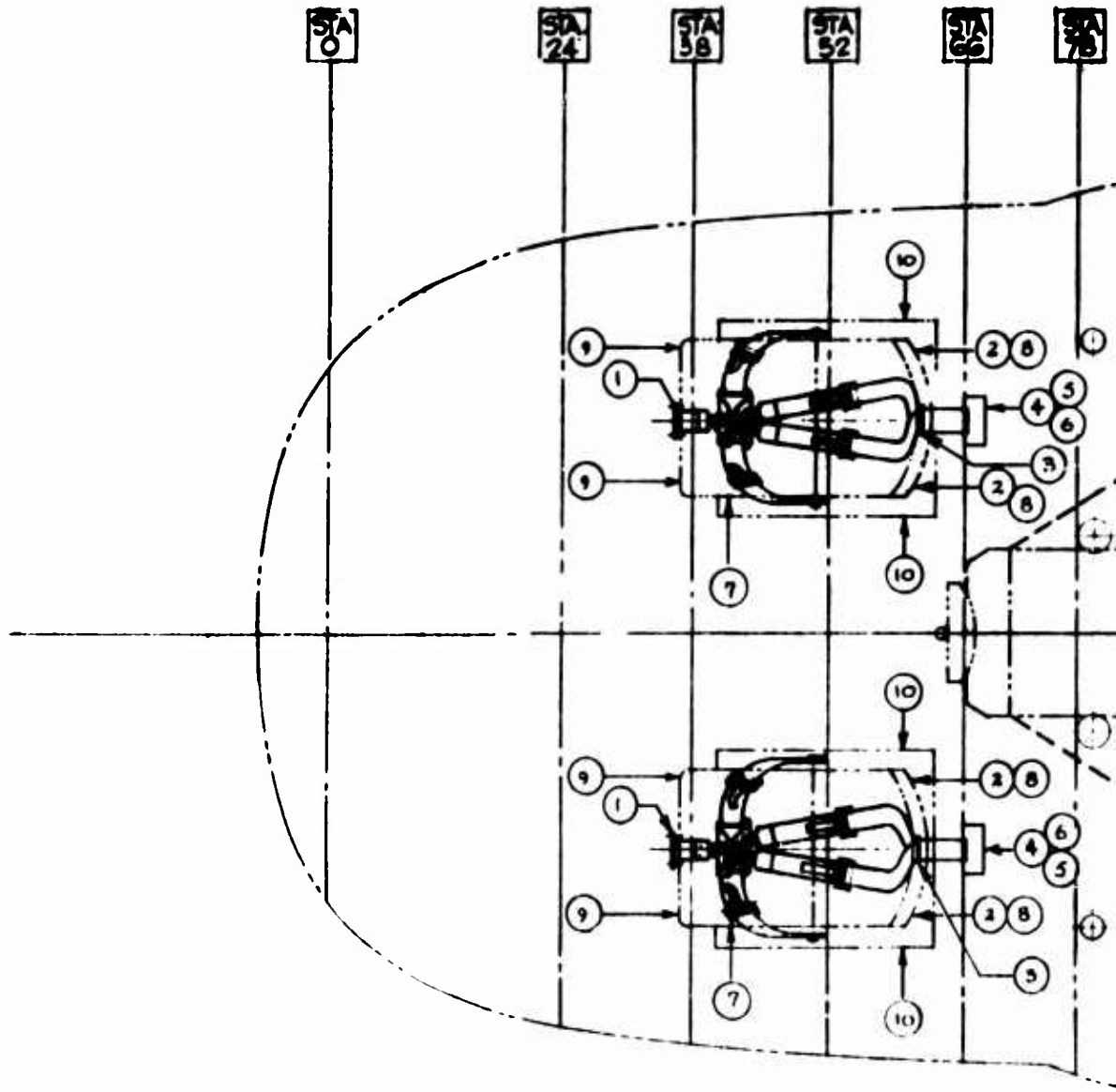
for
U. S. ARMY TRANSPORTATION RESEARCH COMMAND
FORT EUSTIS, VIRGINIA

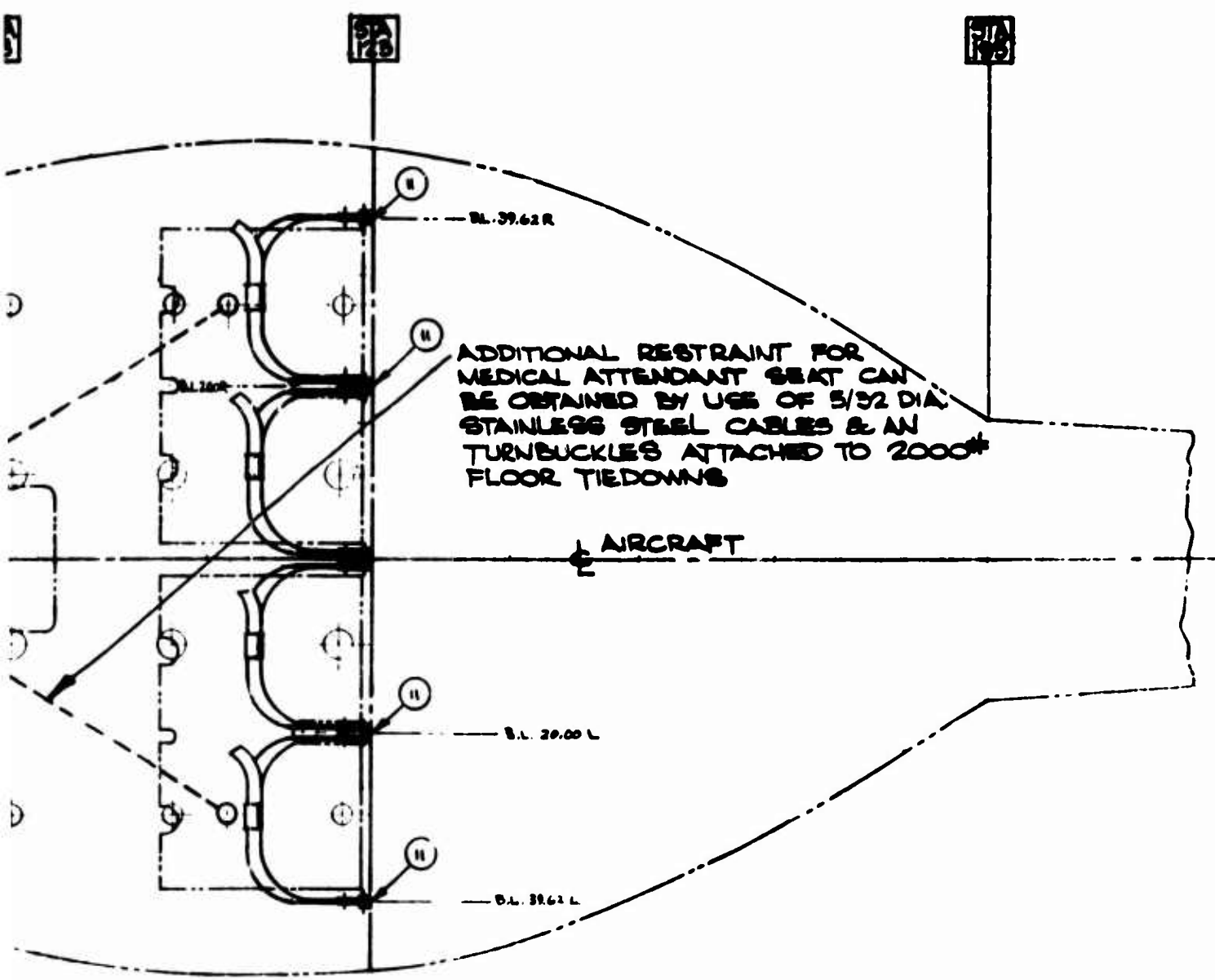
CONTENTS

	<u>Page</u>
HU-1A-10	Installation of Personnel Restraint System 1
HU-1A-11	Installation of Lap Belt Tie-Down Strap (Pilot's and Copilot's Seat) 2
HU-1-12a	Modification of Aft Carriage Attachment (Crew Seat) 3
HU-1A-13	Guide Rod Assembly (Seat Back and Pilot's Shoulder Harness) 4
HU-1A-14	Doubler--Inertia Reel Installation 5
HU-1A-15	Dust Cover--Inertia Reel Strap 6
HU-1A-16	Installation of Inertia Reel and Access Through Lower Panel 7
HU-1A-16	Floor Modification (Left-Hand Side) 8
HU-1A-16	Floor Modification (Right-Hand Side) 9
HU-1A-17	Control Cable Installation and Bolt Replacement (Crew Seat) 10
HU-1A-18	Detail and Installation of Reinforcement Tube (Seat Rail (Front)) 11
HU-1A-19	Detail and Installation of Reinforcement Tube (Seat Rail (Back)) 12
HU-1A-20	Reinforcement and Replacement of Rear Tracks 13, 14, 15
HU-1A-30	Modification of Troop Lap Belt Attachment Fittings 16
HU-1B-50	Installation of Personnel Restraint System 17
AVCIR-10	Lap Belt Tie-Down Strap 18
AVCIR-15	Pilot's Tie-Down Strap 19

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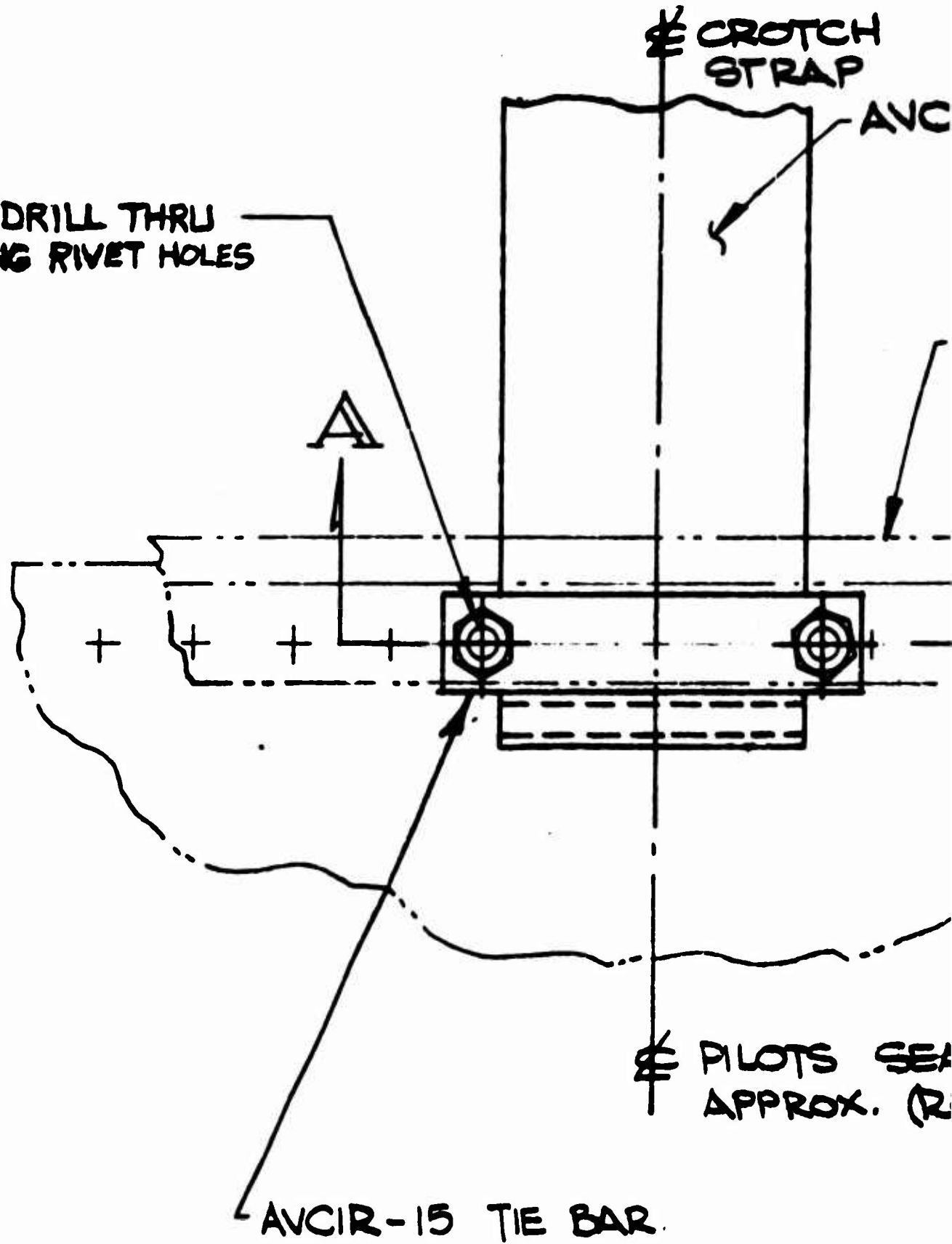
1
FRAMES





FRAMES

$\frac{3}{16}$ DRILL THRU
EXISTING RIVET HOLES



A

CIR-10

FRAME & BUCKET
PILOT & CO-PILOT SEAT
204-070-706 (REF.)

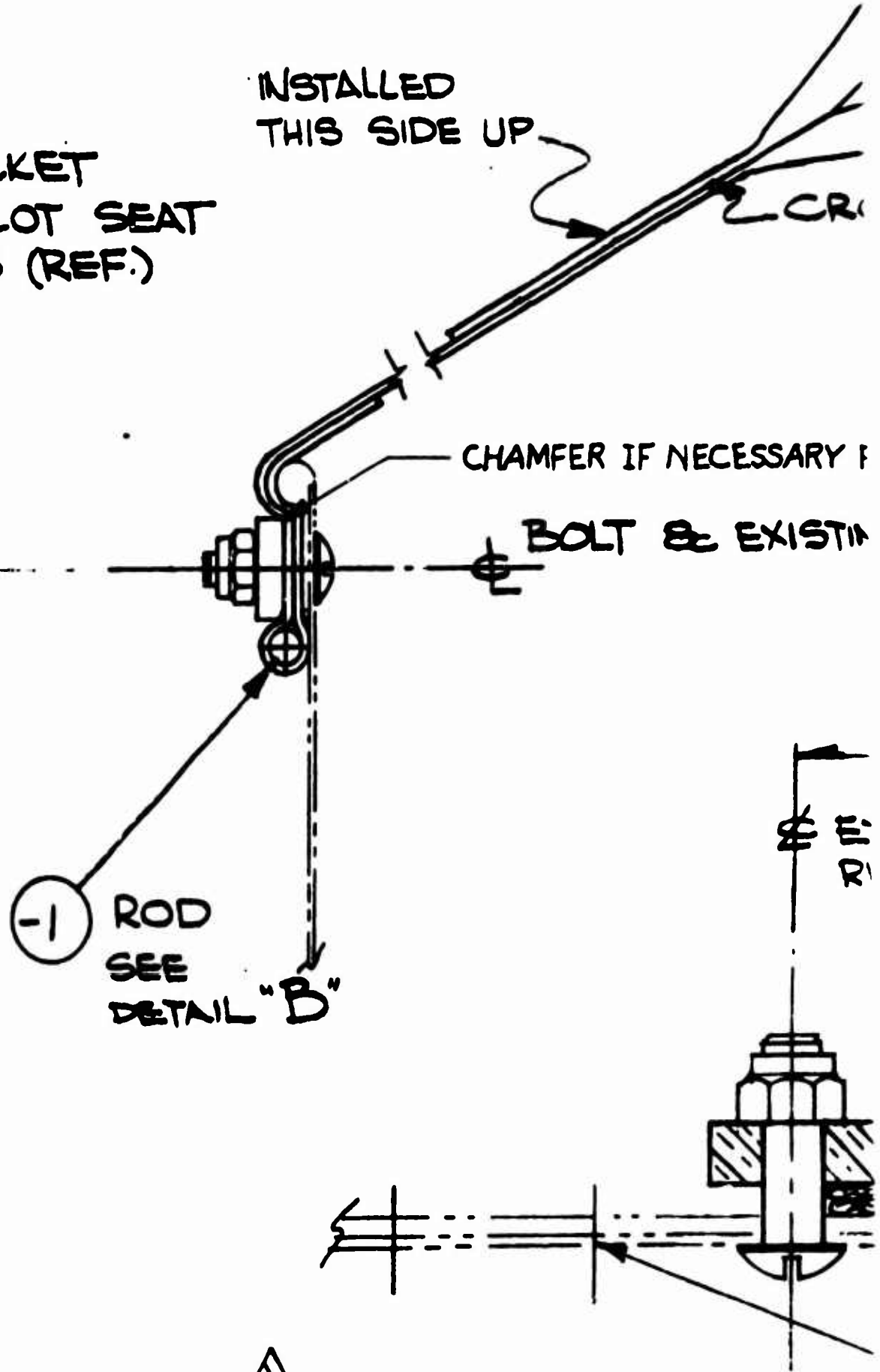
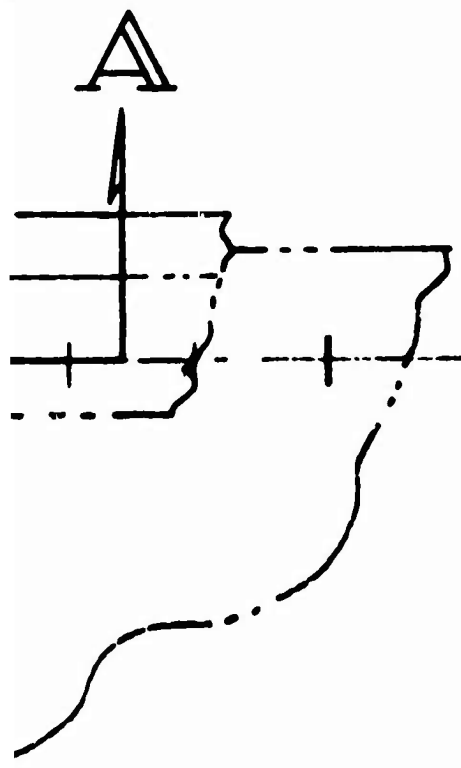
INSTALLED
THIS SIDE UP

CR

CHAMFER IF NECESSARY

BOLT & EXISTING

ROD
SEE
DETAIL "B"



SEAT
(REF.)

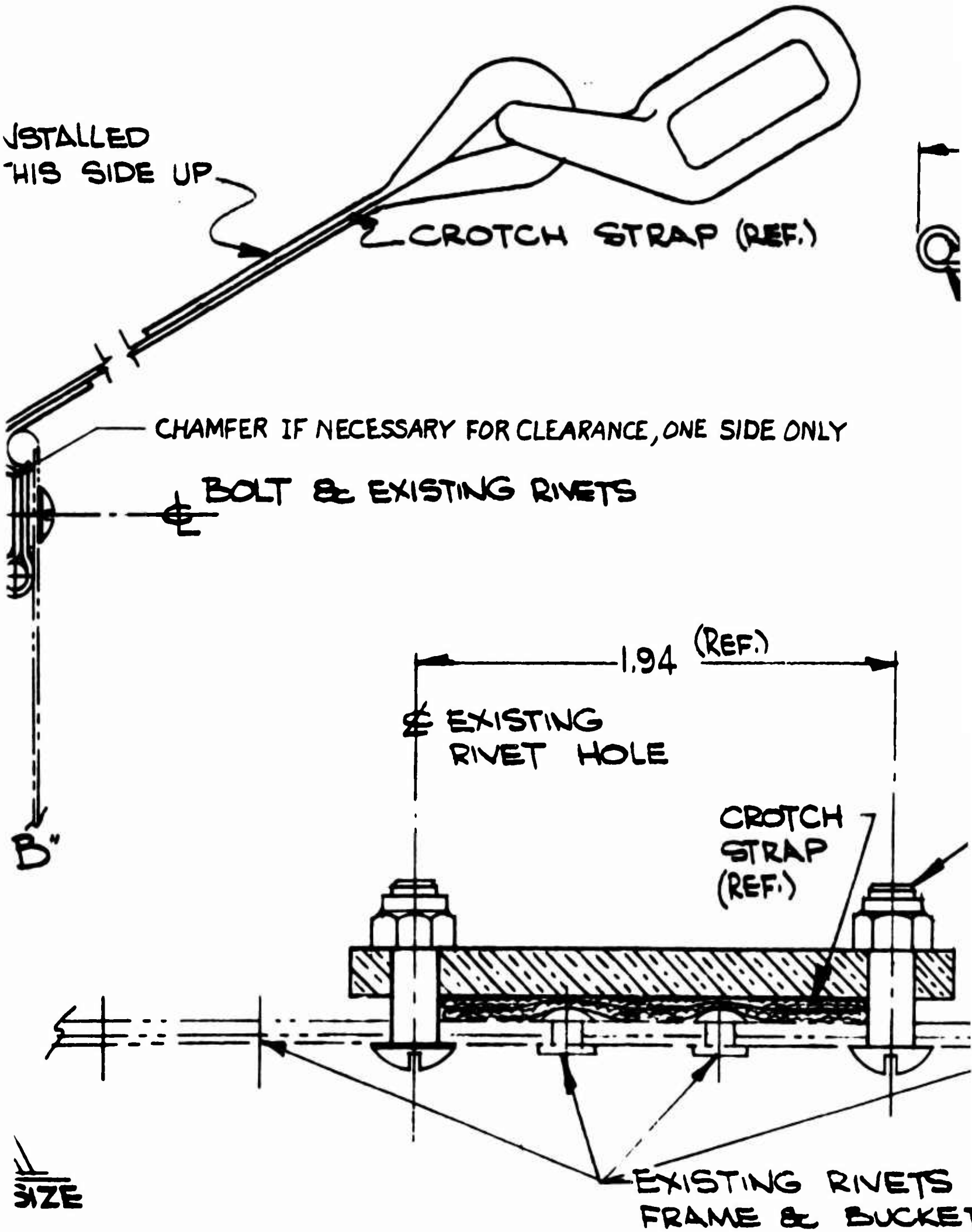
SECTION A
DOUBLE SIZE

INSTALLED THIS SIDE UP

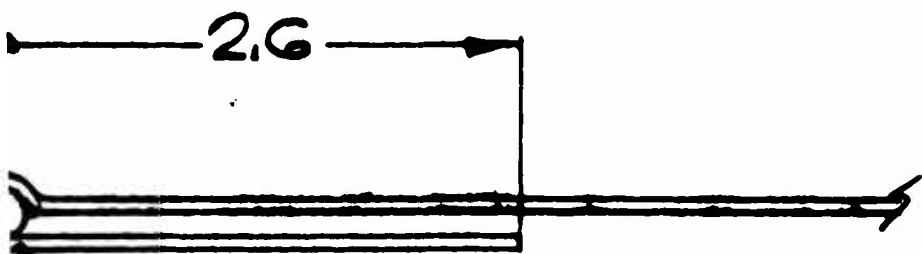
CROTCH STRAP (REF.)

CHAMFER IF NECESSARY FOR CLEARANCE, ONE SIDE ONLY

BOLT & EXISTING RIVETS



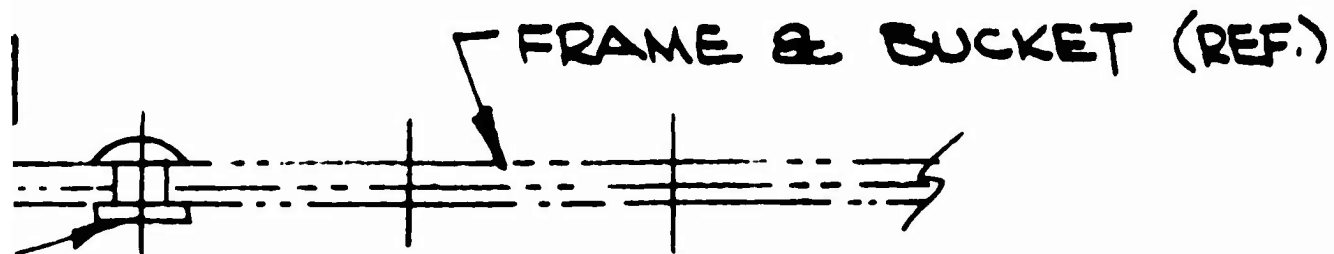
SIZE



CEMENT ROD TO WEBBING IN SEVERAL SPOTS
BEFORE CLAMPING

DETAIL B

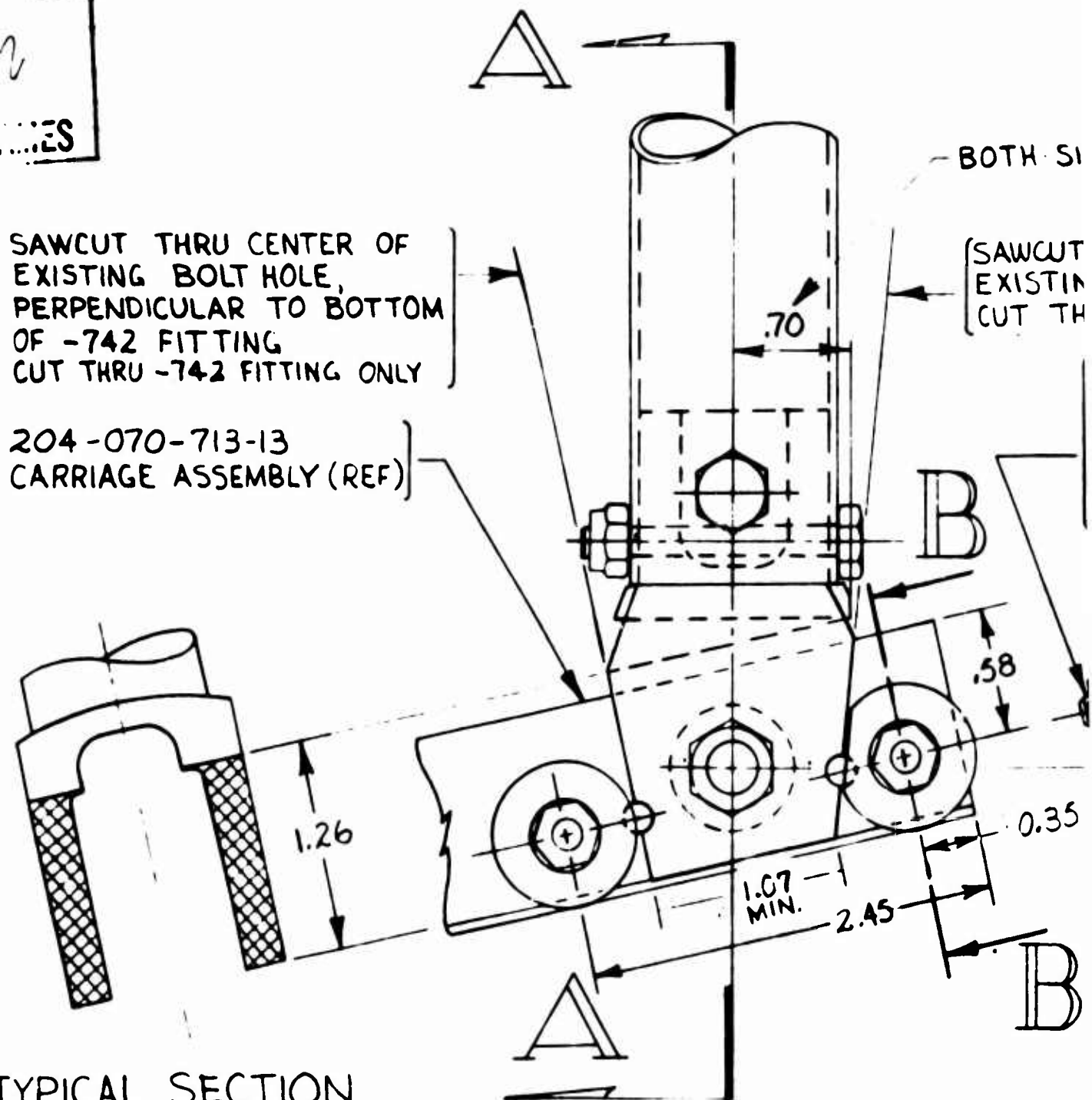
AN 23-9A CLEVIS BOLT
AN 365-1032 NUT
2 REQ EA.



B

IN
IT ASSEM (REF.)

2
PARTS



TYPICAL SECTION
AT SAWCUT

8. REASSEMBLE SIMILAR TO EXISTING ARRANGEMENT
7. INSTALL NEW AN3 BOLTS AND WASHERS. GRIND AN970-3 W
6. DRILL THRU CARRIAGE CHANNEL 0.191 DIA. AS SHOWN, 2 PL
5. DRILL OUT EXISTING ROLLER TO .468 DIA.
4. DRILL NEW .191 DIA. HOLE THRU TUBE AND FITTING AS SHO
3. SAWCUT FITTING AS SHOWN
2. REPLACE EXISTING SPACER WITH NAS43-5-53 SPACER
1. REMOVE. FITTING, 1.25" STEEL TUBE AND CARRIAGE

A

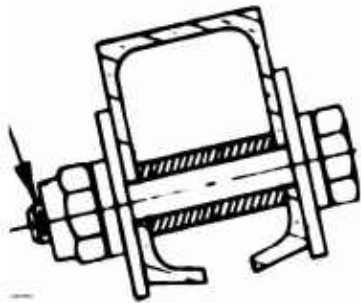
MODIFICATION PROCEDURE:

SECTION A-A

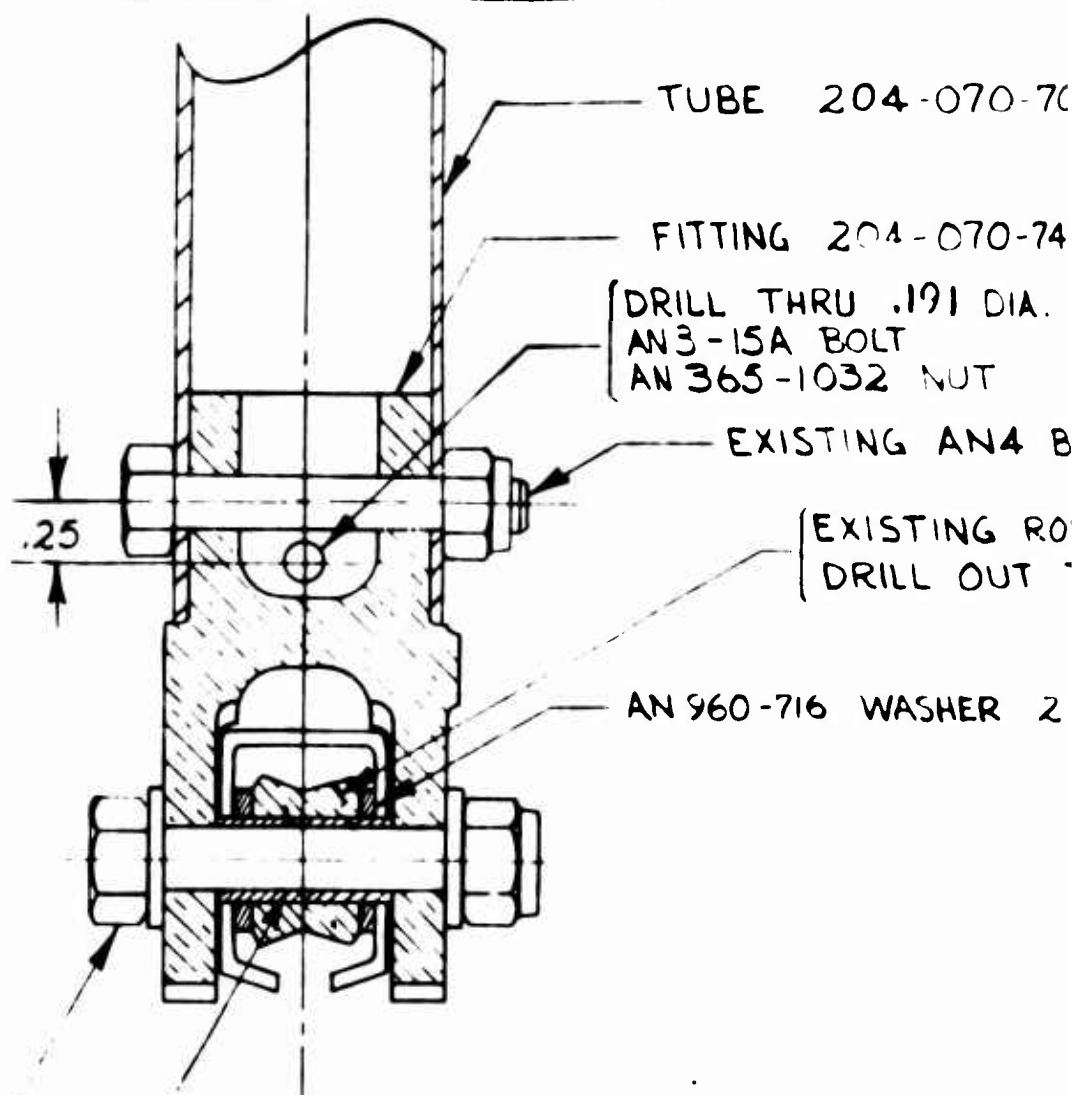
SIDES

DRILL THRU CENTER OF
EXISTING BOLT HOLE
THRU -742 FITTING ONLY

- (DRILL THRU .191 (NO. 11 DRILL)
- AN3-13 BOLT 1 REQ
- AN970-3 WASHER 2 REQ
- AN960PD10 WASHER 2 REQ
- NAS 43-3-42 SPACER (EXISTING)
- AN365-1032 NUT 1 REQ



SECTION B-B (TYPICAL 2 PLACES)



- (NAS 43-5-53 SPACER
- DRILL 29/64 (.453) THRU
- CARRIAGE ONLY FOR SPACER

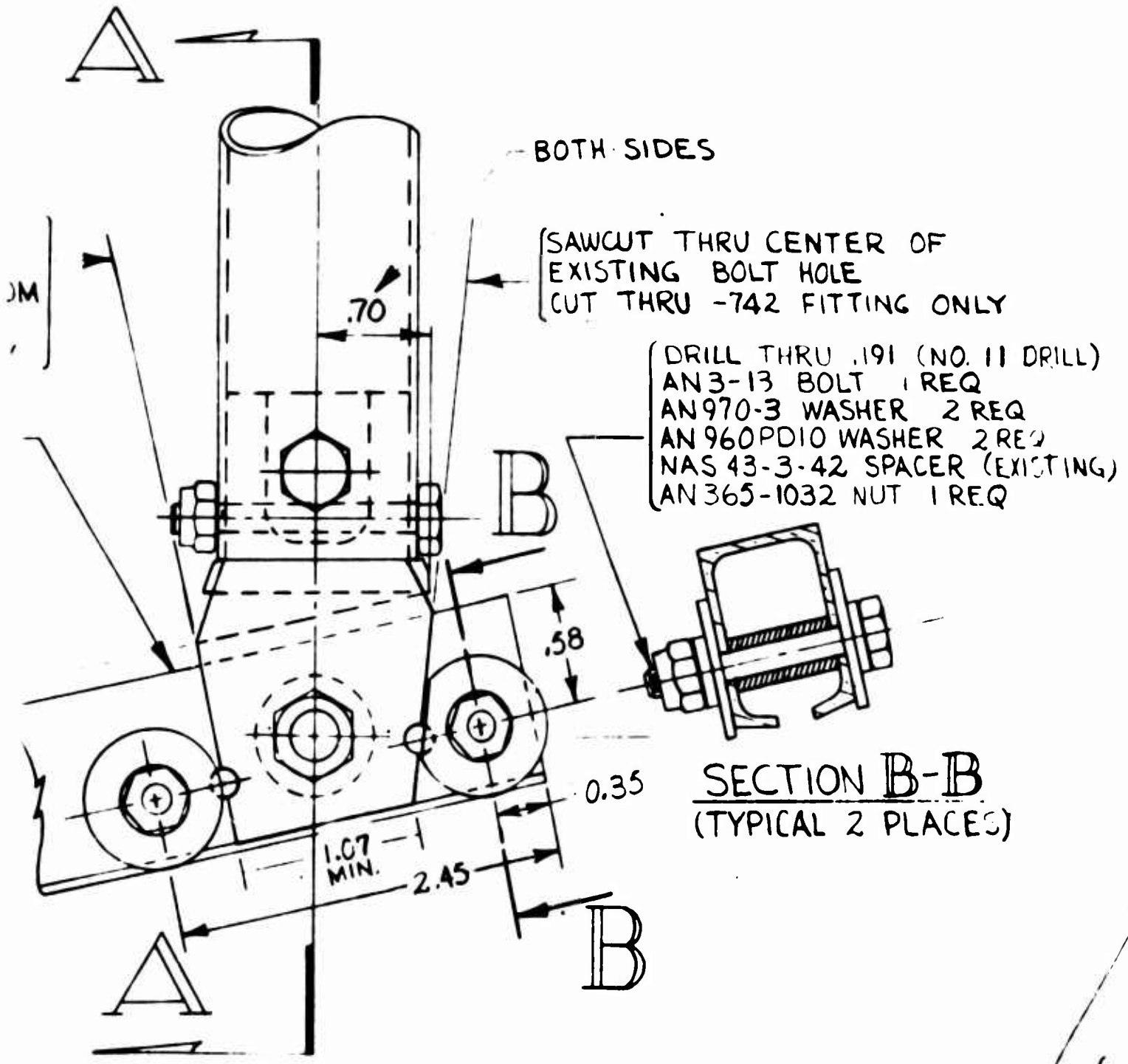
- (LINE DRILL THRU AND REPLACE
- EXISTING BOLT WITH
- AN5-16A BOLT 1 REQ
- AN365-5 NUT 1 REQ
- AN960 PD516L WASHER 2 REQ

WASHERS AS NECESSARY TO CLEAR -742 FITTINGS
PLACES

REMOVE AND INSTALL AN3-15A BOLT

REMOVE CHANNEL FROM SEAT

70x
742
1
80
10L
T
2 F



BOTH SIDES

SAWCUT THRU CENTER OF EXISTING BOLT HOLE CUT THRU -742 FITTING ONLY

(DRILL THRU .191 (NO. 11 DRILL)
 AN3-13 BOLT 1 REQ
 AN970-3 WASHER 2 REQ
 AN960PD10 WASHER 2 REQ
 NAS 43-3-42 SPACER (EXISTING)
 AN365-1032 NUT 1 REQ

.25

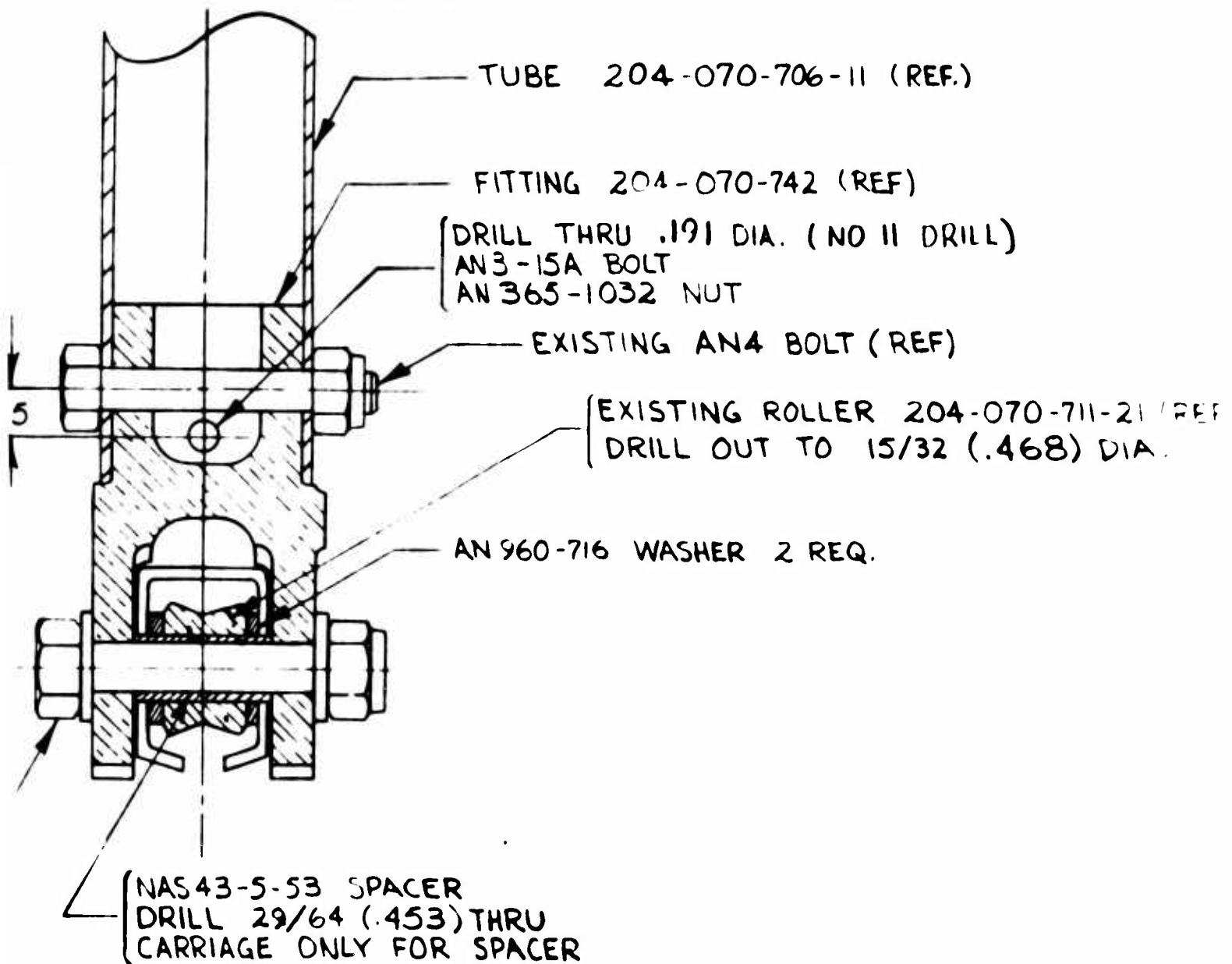
SECTION B-B
(TYPICAL 2 PLACES)

LINE C
 EXIST
 AN5-1
 AN36
 AN961

R TO EXISTING ARRANGEMENT
 BOLTS AND WASHERS. GRIND AN970-3 WASHERS AS NECESSARY TO CLEAR
 CHANNEL 0.191 DIA. AS SHOWN, 2 PLACES
 ROLLER TO .468 DIA.
 HOLE THRU TUBE AND FITTING AS SHOWN AND INSTALL AN3-15A BOLT
 AS SHOWN
 SPACER WITH NAS43-5-53 SPACER
 1.25" STEEL TUBE AND CARRIAGE CHANNEL FROM SEAT

PROCEDURE:

SECTION A-A



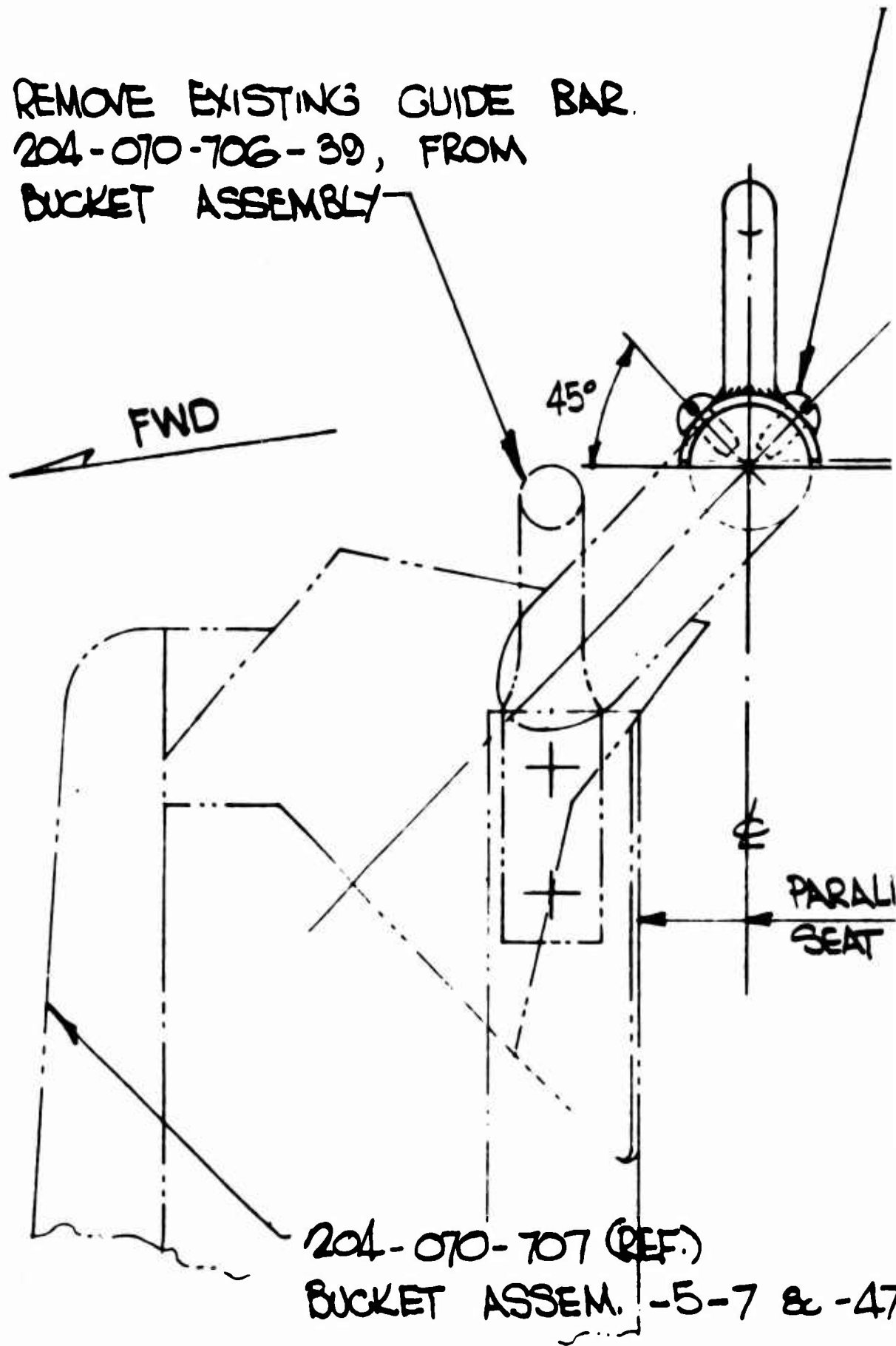
DRILL THRU AND REPLACE
 EXISTING BOLT WITH
 AN3-16A BOLT 1 REQ
 AN365-5 NUT 1 REQ
 AN960 PD516L WASHER 2 REQ

2 -742 FITTINGS

B

2
FRAMES

REMOVE EXISTING GUIDE BAR.
204-070-706-39, FROM
BUCKET ASSEMBLY



- A
1. HEAT TREAT ENTIRE ASSEMBLY AFTER WELD
 2. AFTER HEAT TREAT, DIP ENTIRE ASSEMBLY CHROMATE PRIMER - SPEC. MIL-P-6889

AN330C8-6
SELF TAPPING SCREW
4 PLACES

204-070-715-7
SUPPORT ASSEM. (REF.)
3/4 x .065 STL TUBE

45° (REF.)

.08 x 45°
FILLET WELD

1/2 SAWCUT

.60

LEVEL TO
BACK.

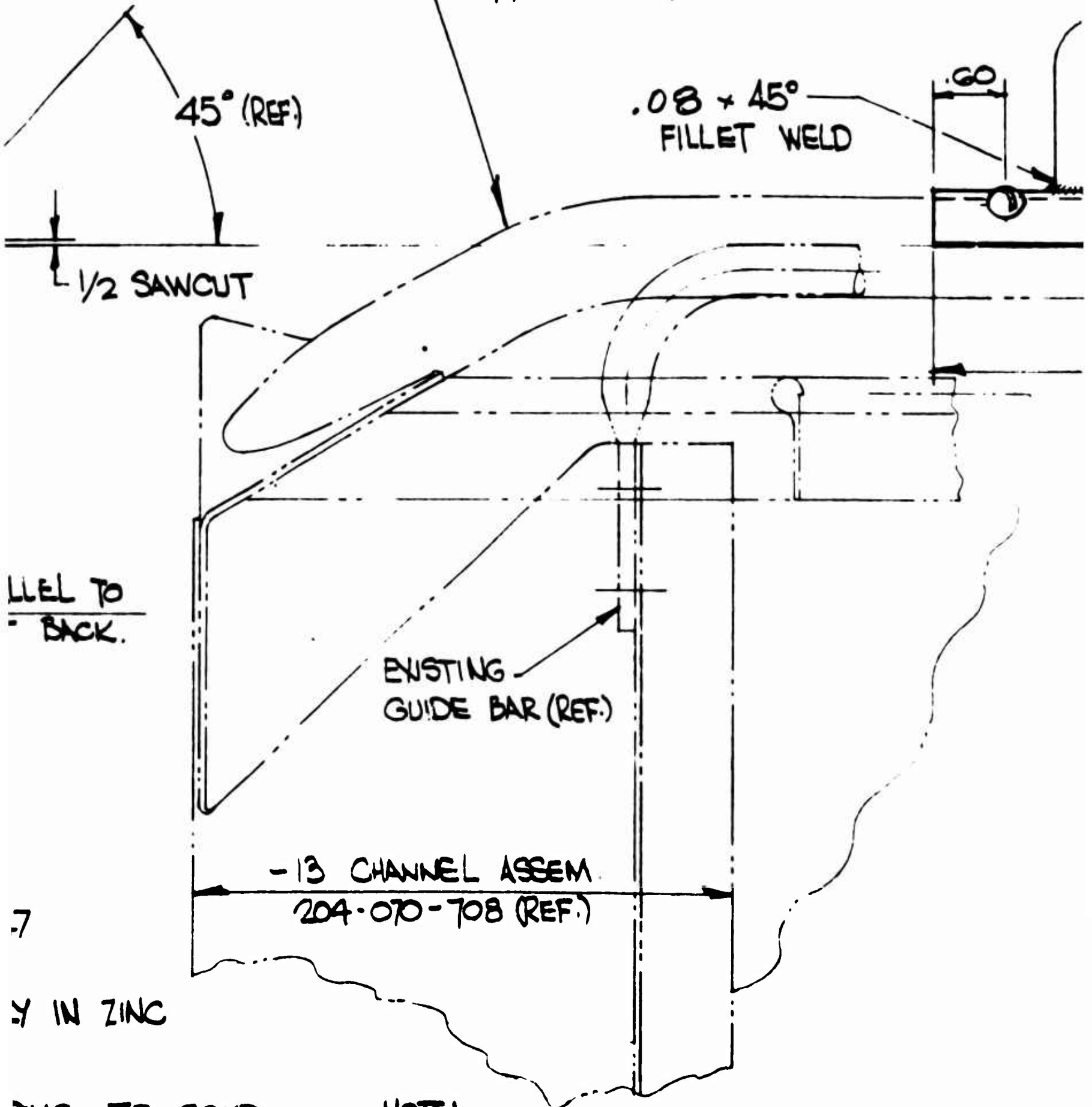
EXISTING
GUIDE BAR (REF.)

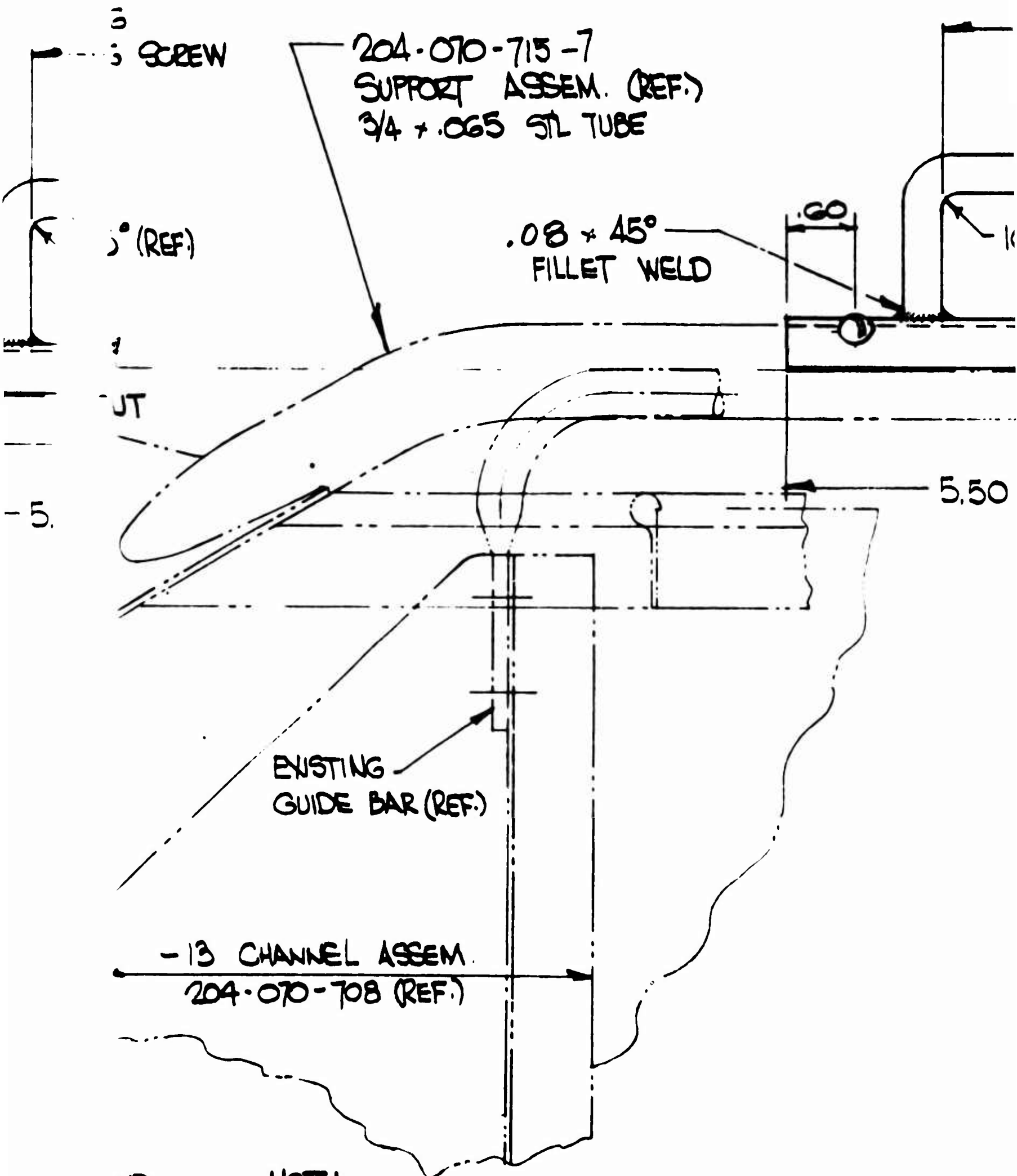
-13 CHANNEL ASSEM.
204-070-708 (REF.)

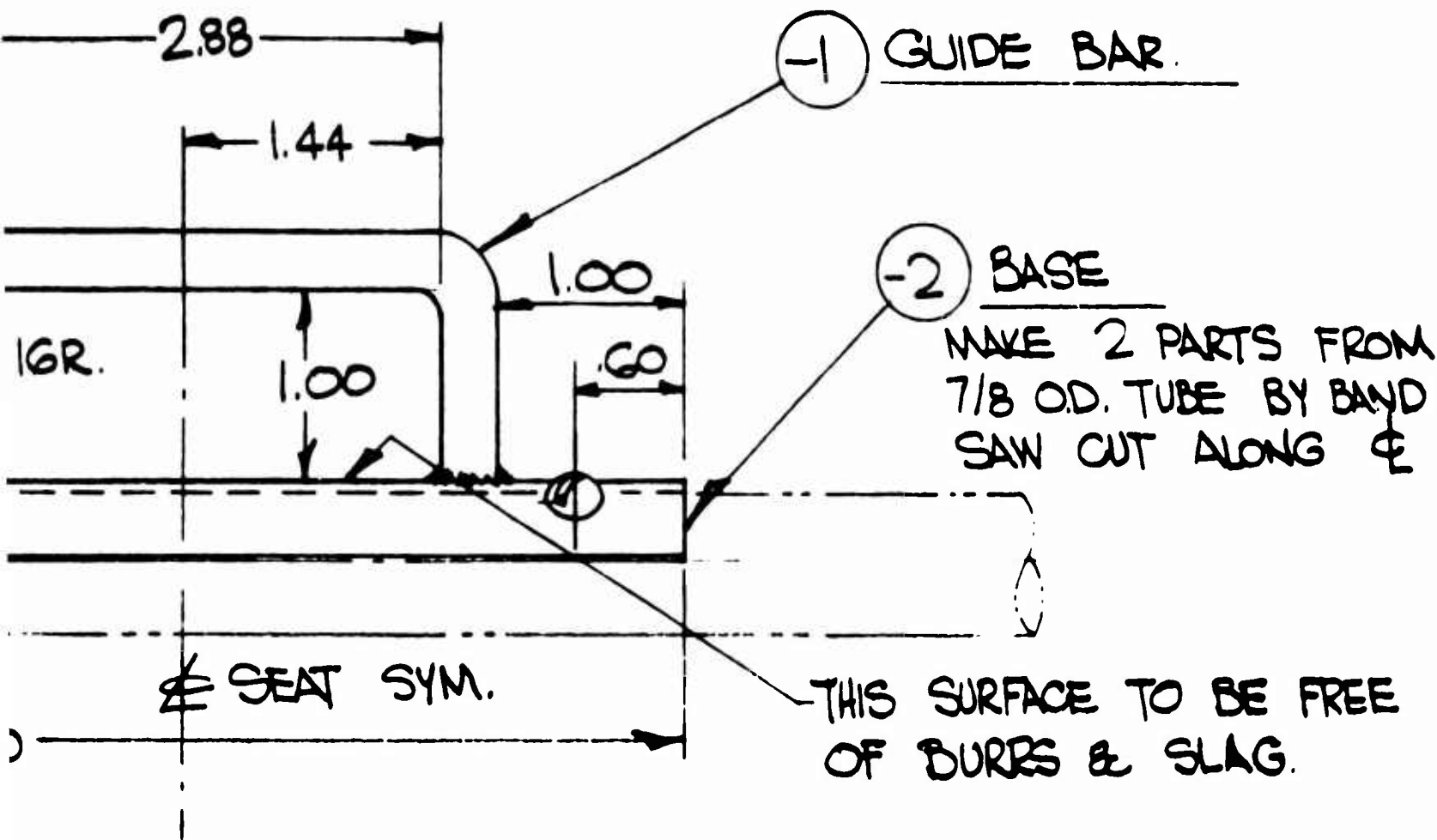
7
Y IN ZINC

DING - TG COND.

NOTE: -

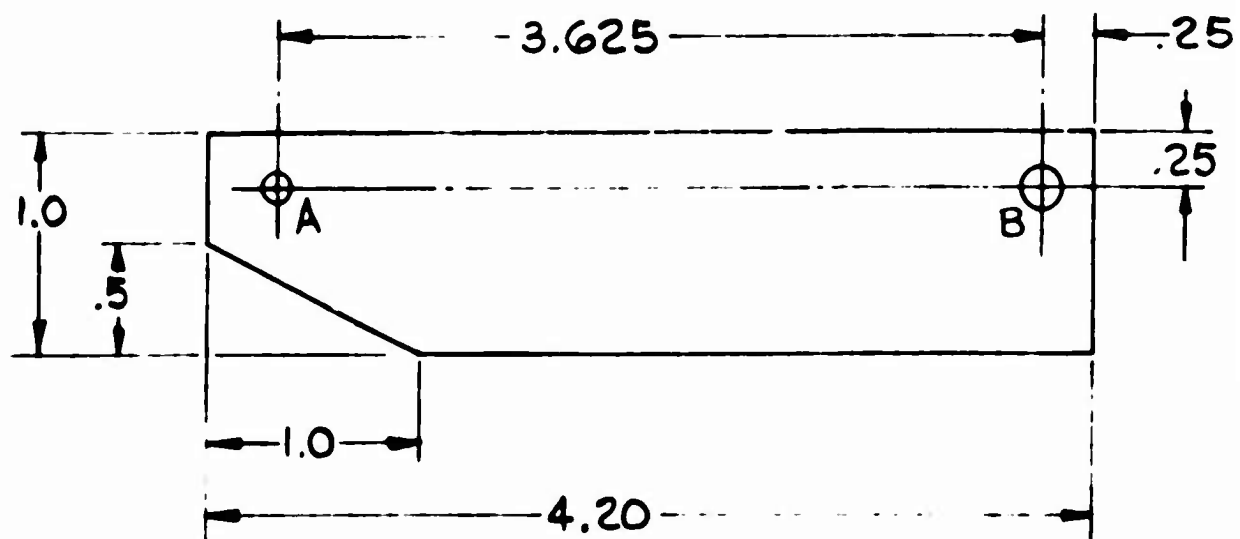






B

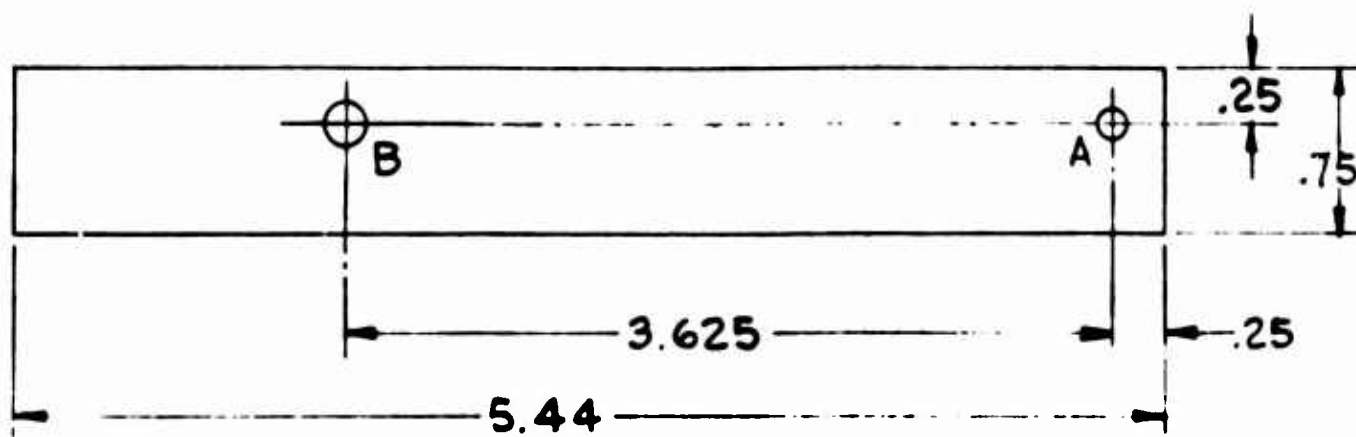
2
FRAMES



DETAIL -1
DOUBLER (.050 THICK SHEET)

HOLE	SIZE
A	1/8 DRILL (.125 DIA) THRU
B	#11 DRILL (.193 .190 DIA) THRU

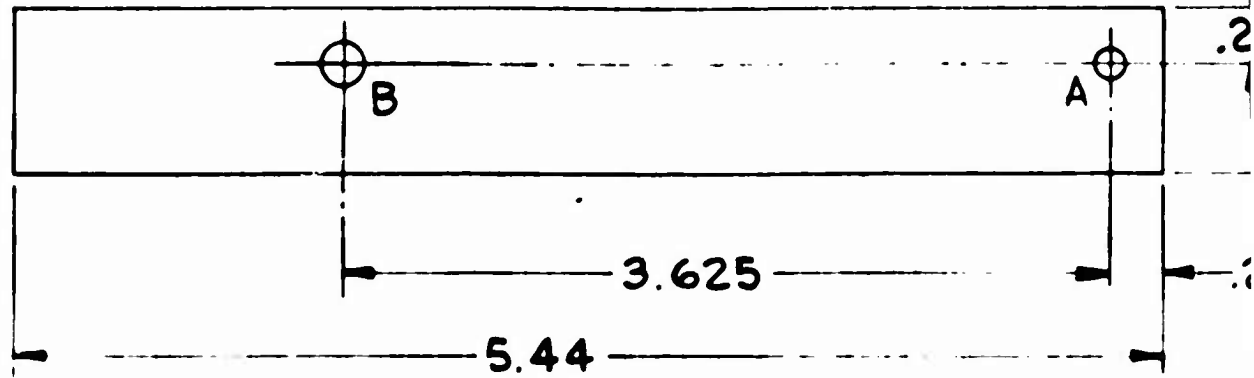
A



.10

DETAIL - 2

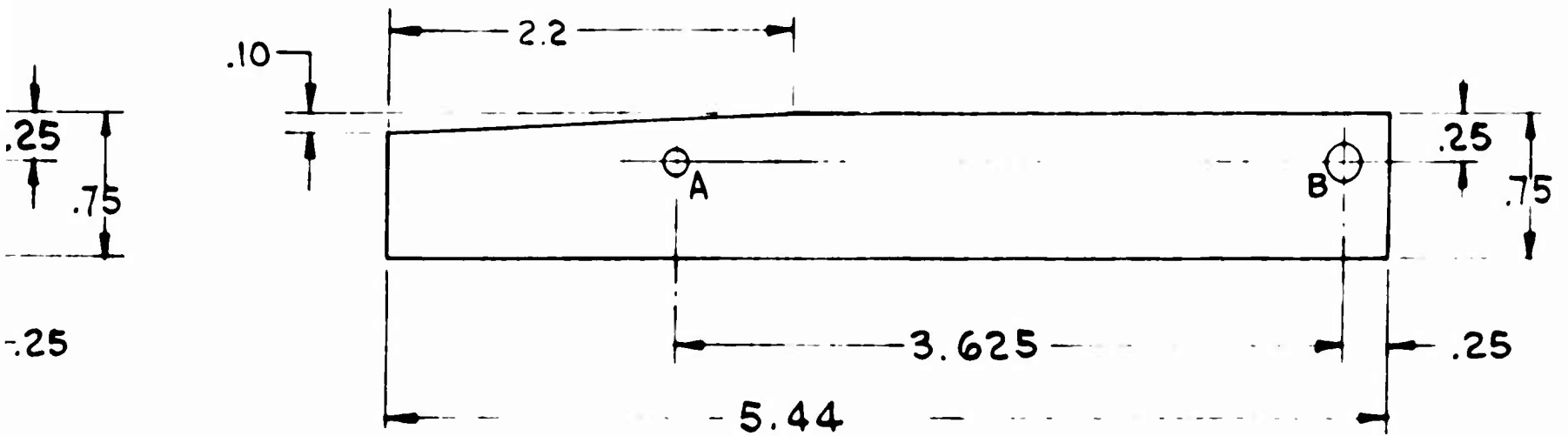
DOUBLER (.063 THICK SHEET)



DETAIL - 2

DOUBLER (.063 THICK SHEET)

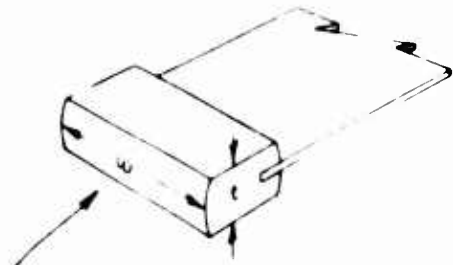
SHEET)



DETAIL -3
DOUBLER (.063 THICK SHEET)

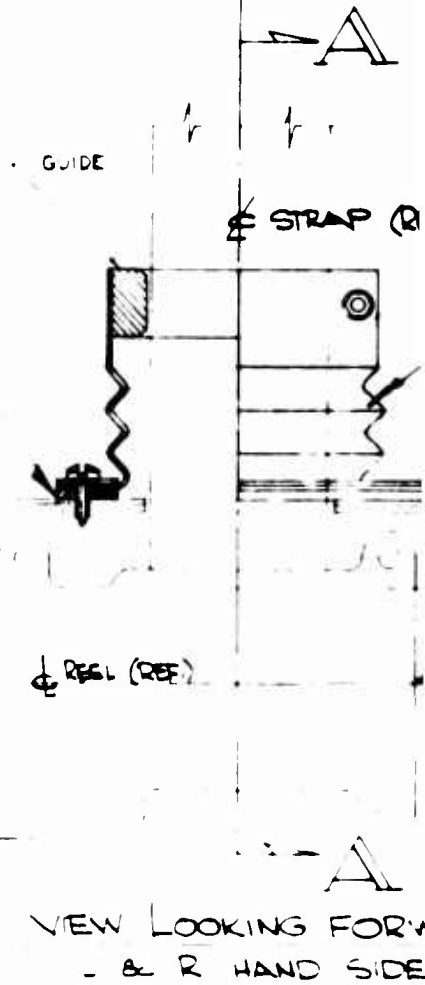
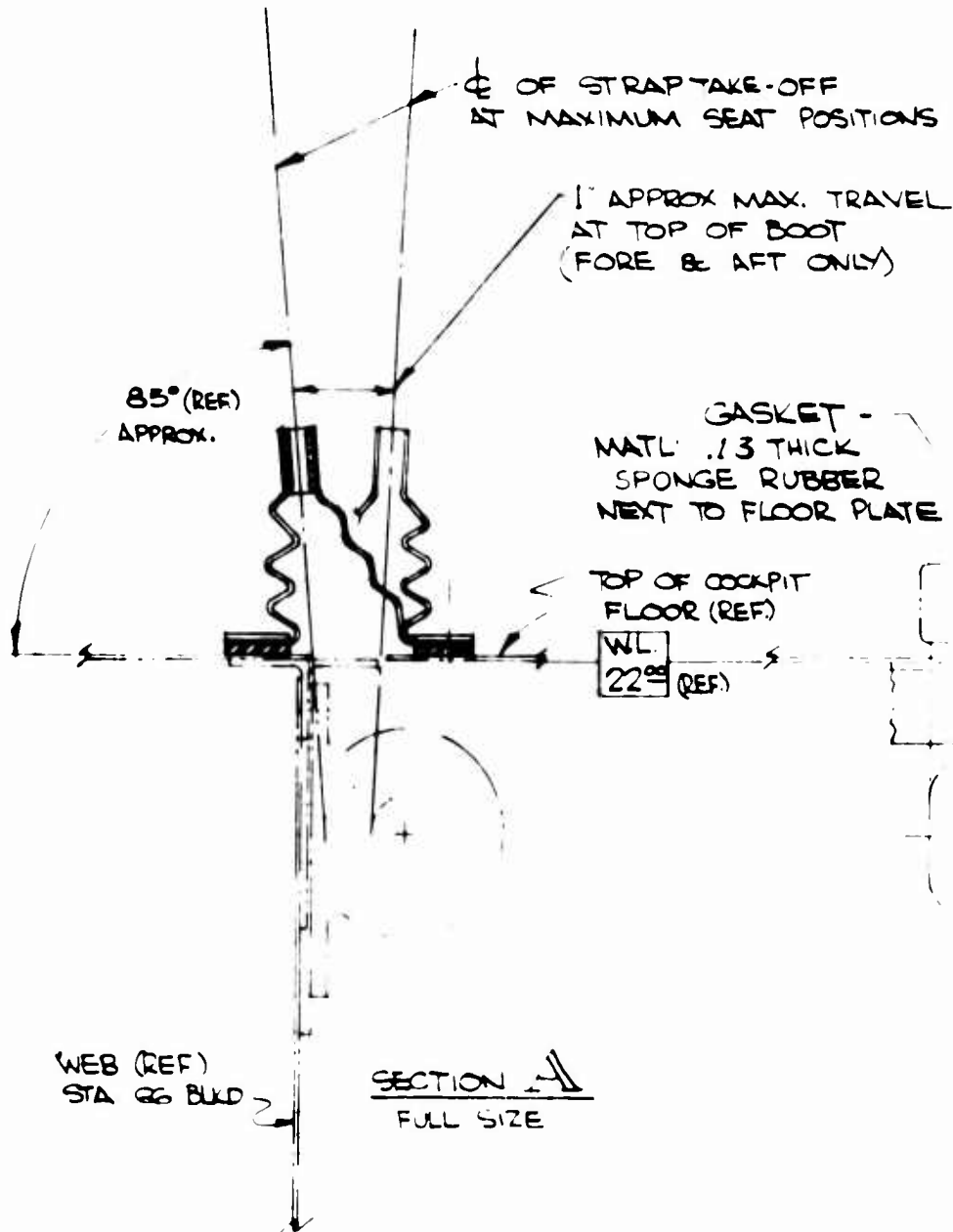
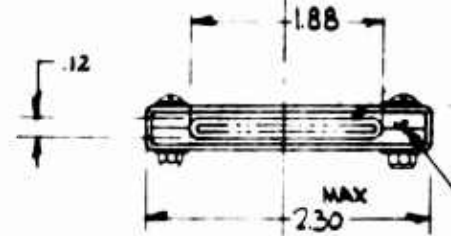
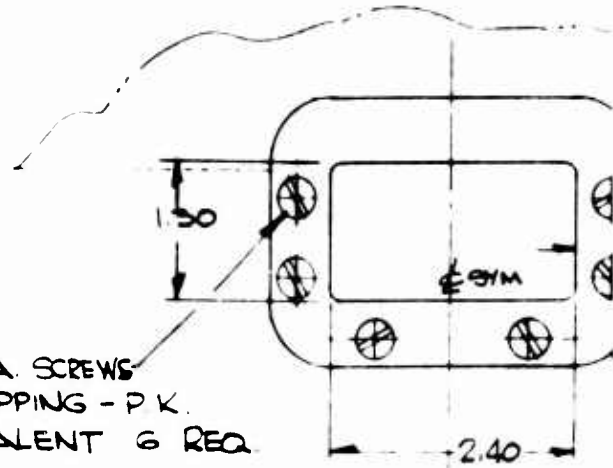
B

FRAMES



NOTE: -1 GUIDE MUST PERMIT ASSEMBLY USING SHOULDER HARNESS STRAP WITH END FITTING AS SHOWN (t = .25 IN ; w = 1.75 IN)

*#8-32 DIA. SCREWS
SELF-TAPPING - P.K.
OR EQUIVALENT 6 REQ.

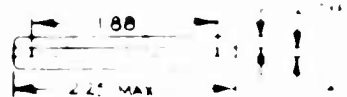
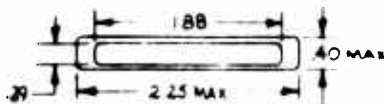


ACCESS DOOR ON COCKPIT
FLOOR 204-031-327 (REF)
(L.H. SIDE ONLY)

BASE PLATE
MAT'L: .06 AL. AL
7075-T6 BONDED TO BOOT

HOLE MUST BE FREE OF ROUGH EDGES
TO PERMIT EASY MOVEMENT OF
NYLON OR DACRON WEBBING WITHOUT FRAYING

50 MAX



GUIDE - BONDED TO BOOT
MAY BE MADE OF ALUM.
ALLOY, PLASTIC OR PHENOLIC
FIBRE MATERIAL

-1 GUIDE - ALTERNATE NO. 1 -
SINGLE PIECE -

-1 GUIDE - ALTERNATE NO. 2 -
SHEET STOCK -

(REF.)

BOOT - MAT'L: 1/32 THICK APPROX
MOULDED NEOPRENE RUBBER OR FABRIC
BONDED WITH BASE PLATE
AND GUIDE

BASE PLATE

TYPE MA-G INERTIA REEL
INSTALLED BENEATH FLOOR
- & R HAND SIDE, AFT SIDE
OF STA 66 BLKD

FORWARD 1/4 SECTION
DE @ BL 22 APPROX

SEAT ASSEMBLY
PILOT & CO-PILOT
204-070-700 (REF)

HAR
PACIFIC SCIENTIF

ACCESS DOOR -
IN COCKPIT FLOOR (REF)
L.H. SIDE ONLY

FUSELAGE SHELL
FWD SECTION (REF)

CONTROL INSTALLATION
TO PILOT SEAT HJ-1-17

HU-1-16
FLOOR MODIFICATION
& INERTIA REEL INSTALL
SHEET #2 L.H. SIDE (REF)
SHEET #3 R.H. SIDE (REF)

TOP OF COCKPIT FLOOR
W.L. 22 APPROX. (REF)

FUSELAGE CONTOUR
AT STA 78 BLKD (REF)

OUTBOARD

FORWARD

BL 30 (REF)

BL 22
L.H. SIDE

BL 20
R.H. SIDE

ISOMETRIC VIEW LOOKING DOWN

L.H. SIDE OF AIRCRAFT
SCALE: 1/4 APPROX

A

HARNES-AIRCRAFT SAFETY SHOULDER, ADJUSTABLE
IFIC CO.-PART NO. O1C1533-78 IN LENGTH

DUST COVER - HU-1-15

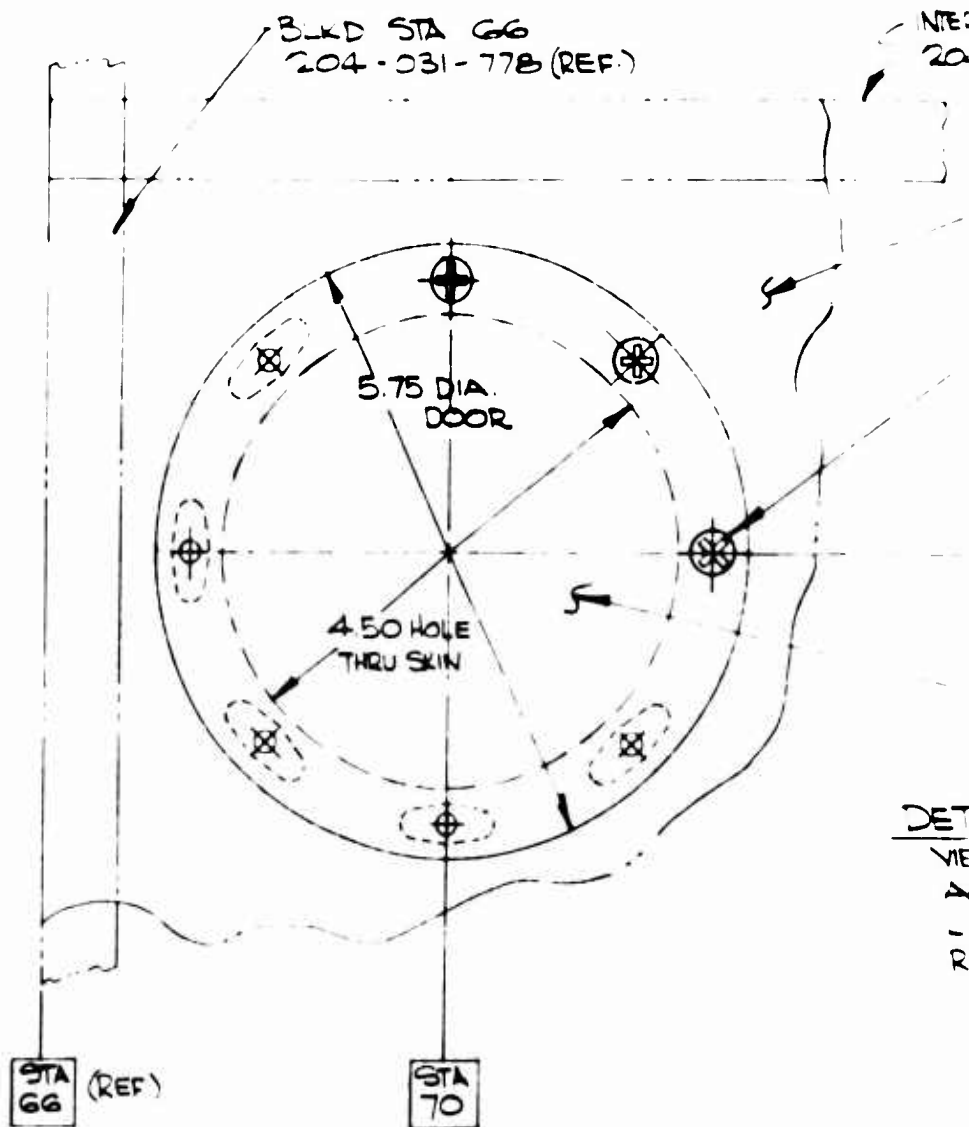
STA
66 (REF.)

AFT SIDE- STA 66 BLKD (REF.)

STA
78 (REF.)

NEW ACCESS DOOR THRU
LOWER SKIN PANEL
SEE DETAIL A

OUTER SKIN GAGE .040
LOWER PANEL
204-031-007 (REF.)



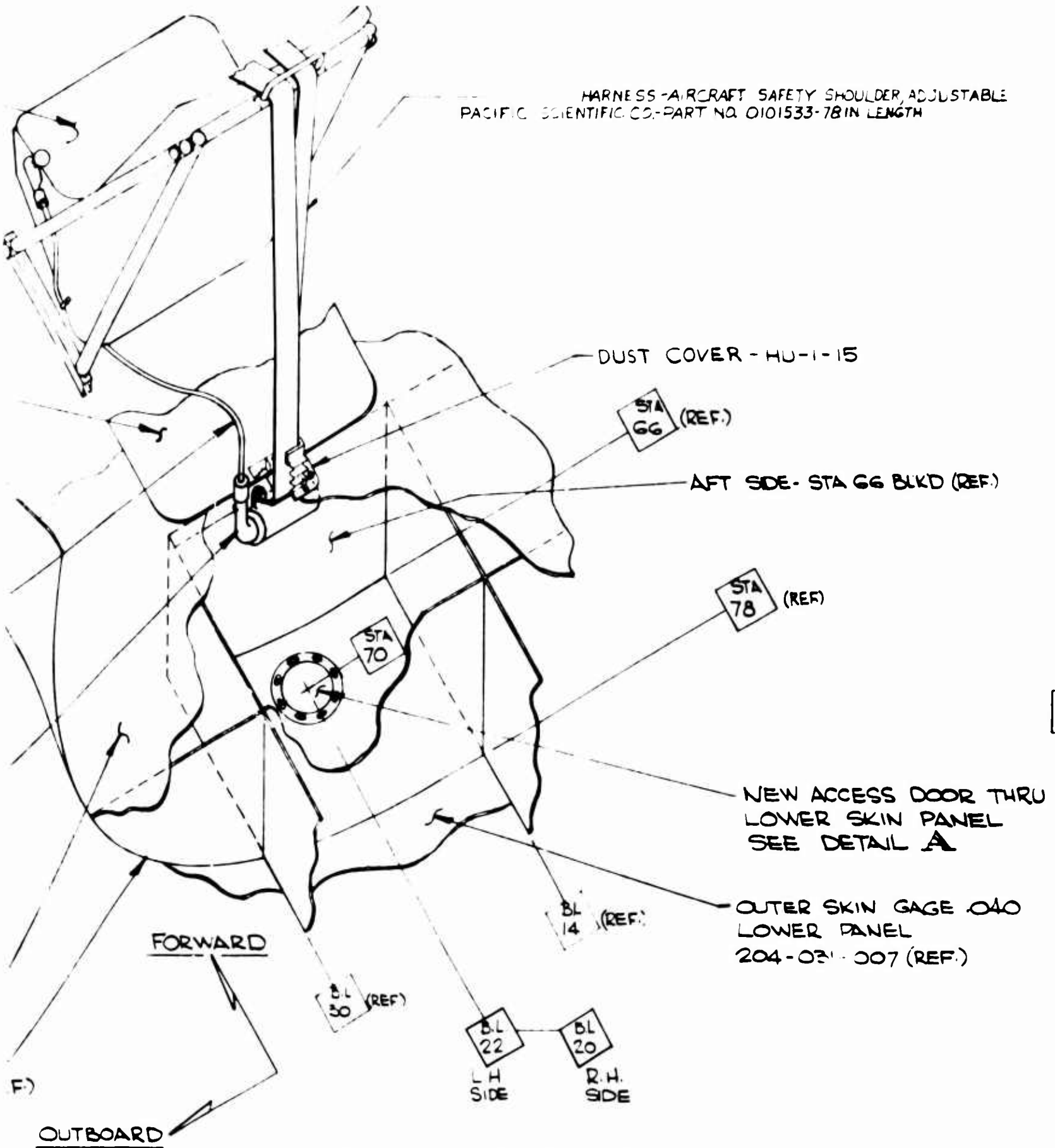
(REF.)

2. H.
SIDE

DOWN

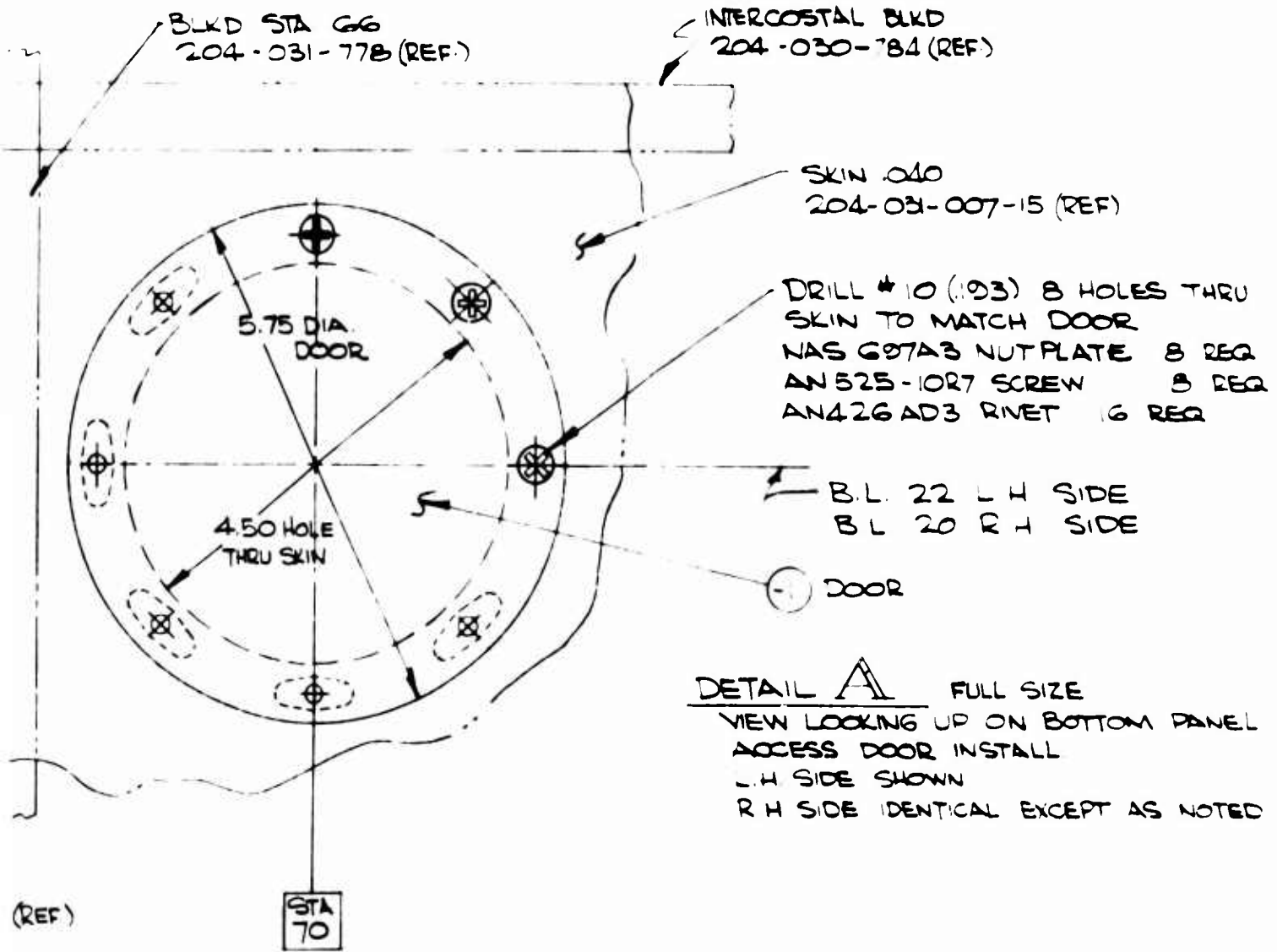
THIS PART REPLACES SHOULDER HARNES PART NO AF 50D3770 (TYPE G-1)
AND INERTIA REEL STRAP PART NO O1C1238 (EAC SCIENT CO.) THIS
CHANGE RESULTS IN .0 LB WT DECREASE FOR EACH SEAT

HARNESS-AIRCRAFT SAFETY SHOULDER, ADJUSTABLE
PACIFIC SCIENTIFIC CO.-PART NO. 0101533-78 IN LENGTH



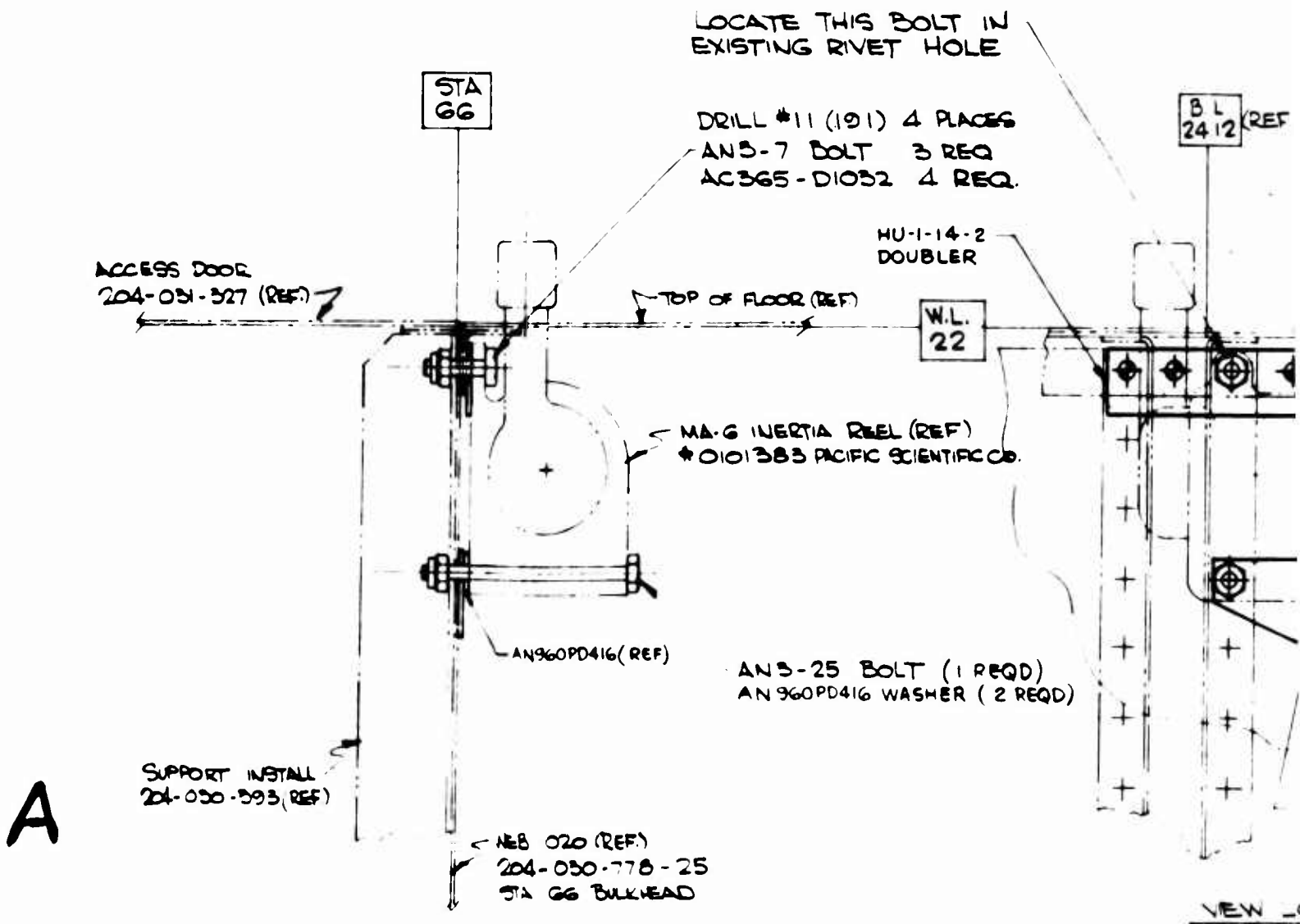
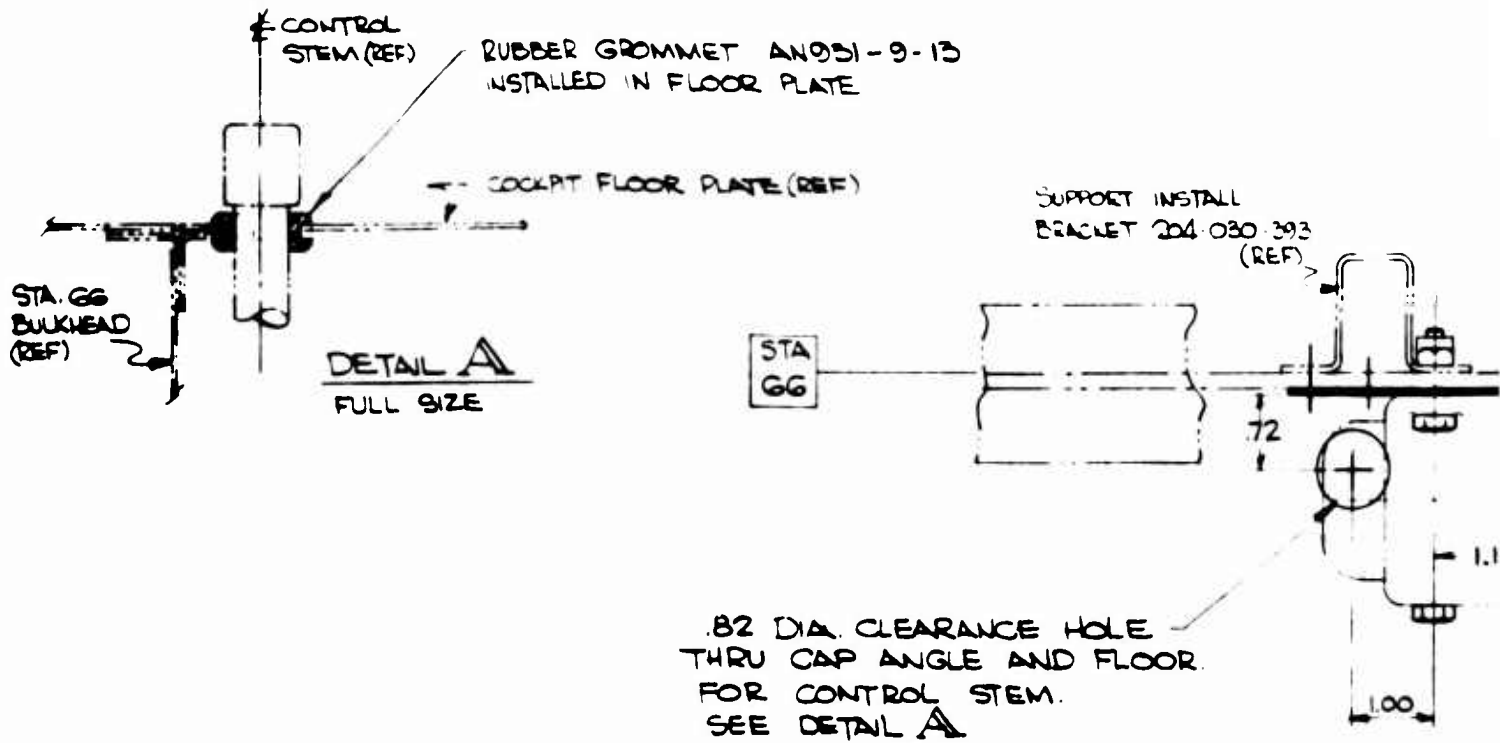
ISOMETRIC VIEW LOOKING DOWN
L.H. SIDE OF AIRCRAFT
SCALE: 1/4 APPROX.

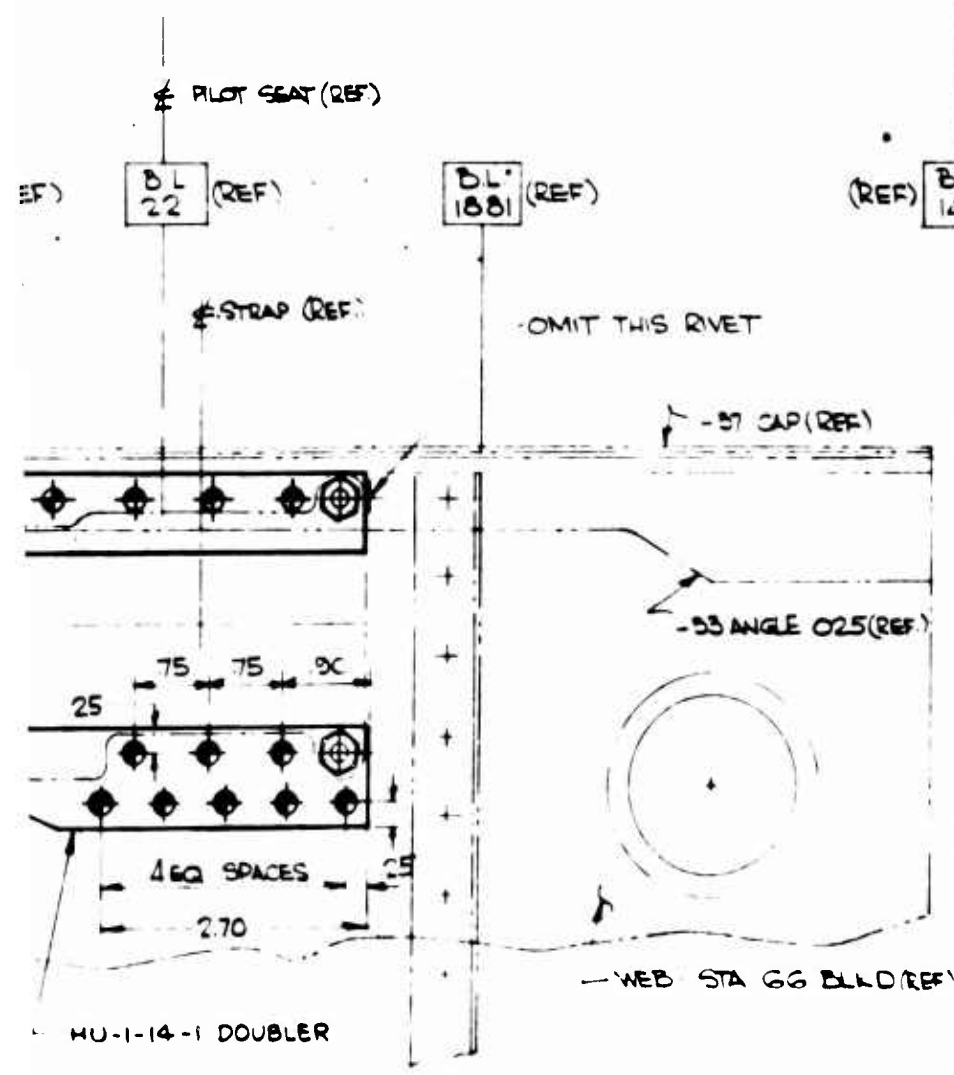
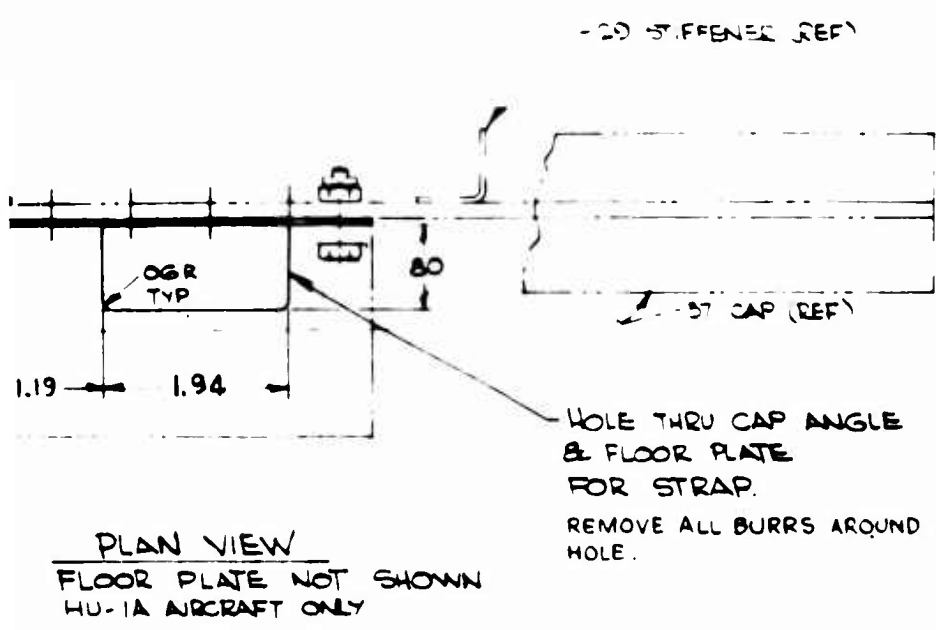
⚠ THIS PART RE AND INERTIA R CHANGE RESU



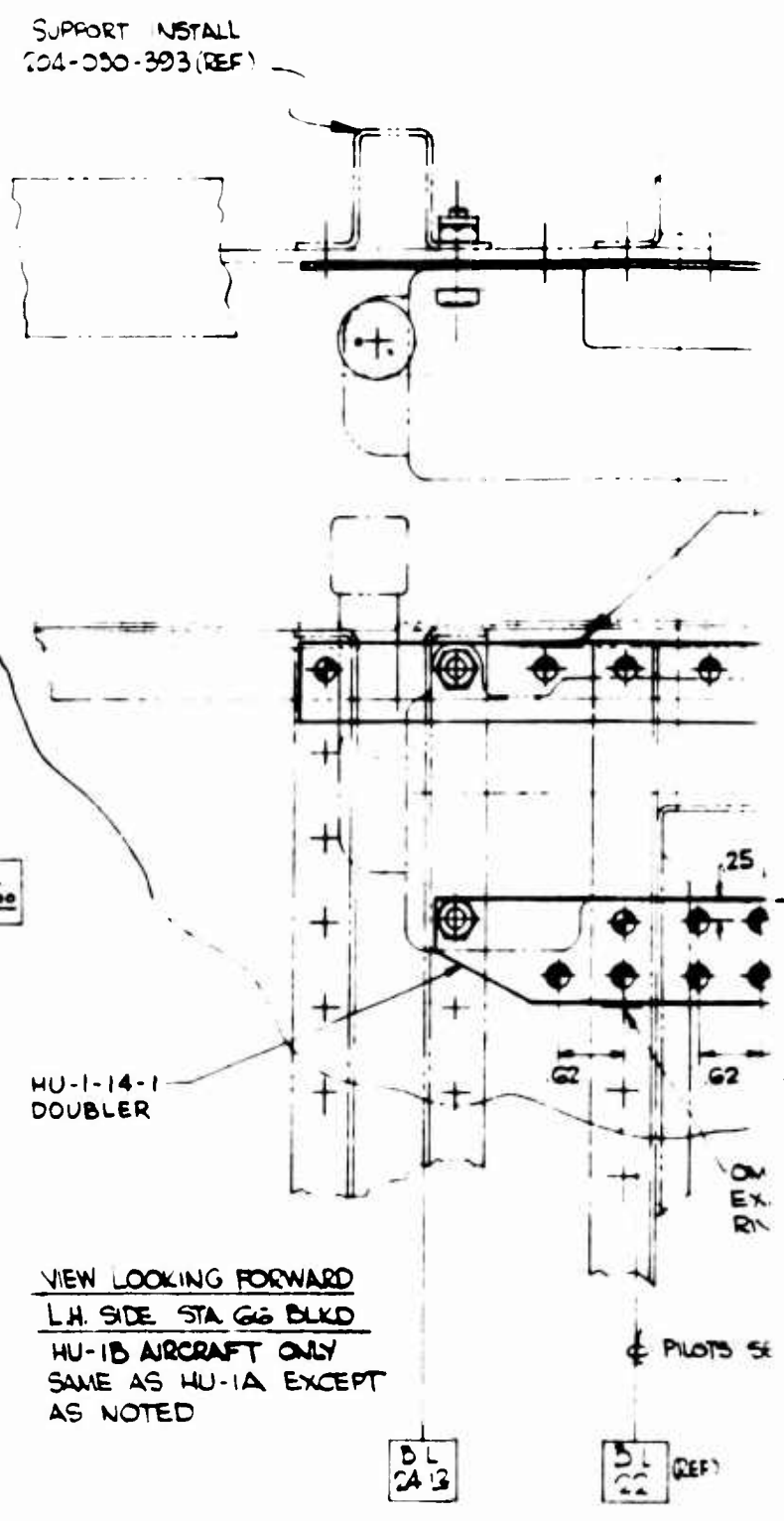
B

REPLACES SHOULDER HARNESS PART NO AF 50D3770 (TYPE G-1)
1 REEL STRAP PART NO 010123B (KAC SCIENT CO.). THIS
SULTS IN .10 LB WT DECREASE FOR EACH SEAT



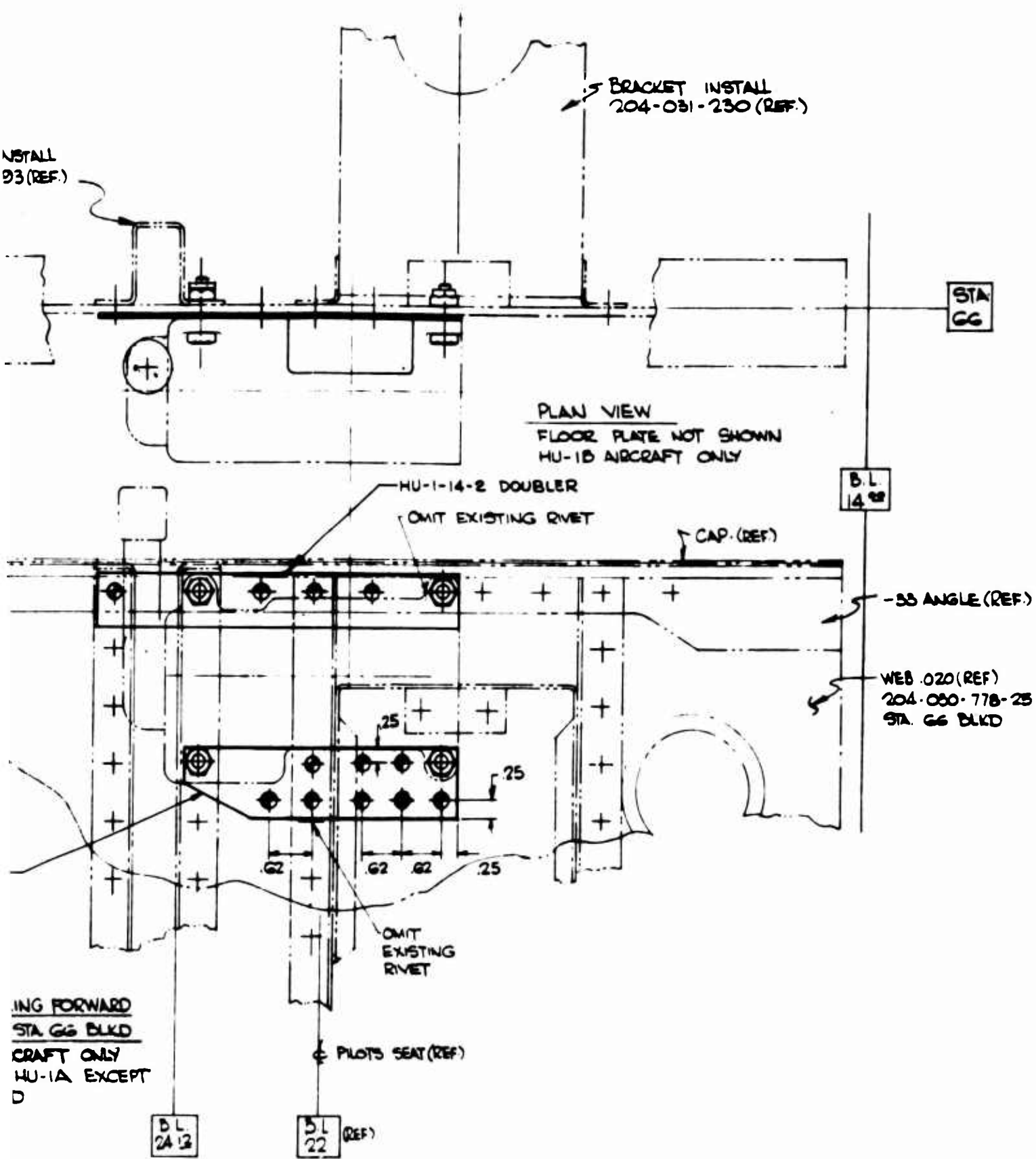


LOOKING FORWARD L.H. SIDE HU-1A AIRCRAFT ONLY



- 3 SYMBOL INDICATES REPLACING EXISTING RIVETS WITH AN 470AD5, DRILL THRU DOUBLERS HU-1-14-1 & 2.
- 2 SYMBOL INDICATES REPLACING EXISTING RIVETS WITH AN 426AD5, DRILL THRU & CSK (NEAR SIDE) OF DOUBLER HU-1-14-2.
- 1 SYMBOL INDICATES NEW AN 470AD4 RIVET, DRILL THRU DOUBLER HU-1-14-1

NOTES:



BRACKET INSTALL
204-031-230 (REF.)

INSTALL
93 (REF.)

STA
66

PLAN VIEW
FLOOR PLATE NOT SHOWN
HU-1B AIRCRAFT ONLY

B.L.
14

HU-1-14-2 DOUBLER
OMIT EXISTING RIVET

CAP. (REF.)

-33 ANGLE (REF.)

WEB .020 (REF)
204-030-778-25
STA. 66 BLKD

OMIT
EXISTING
RIVET

PILOTS SEAT (REF.)

B.L.
24 1/2

B.L.
22 (REF.)

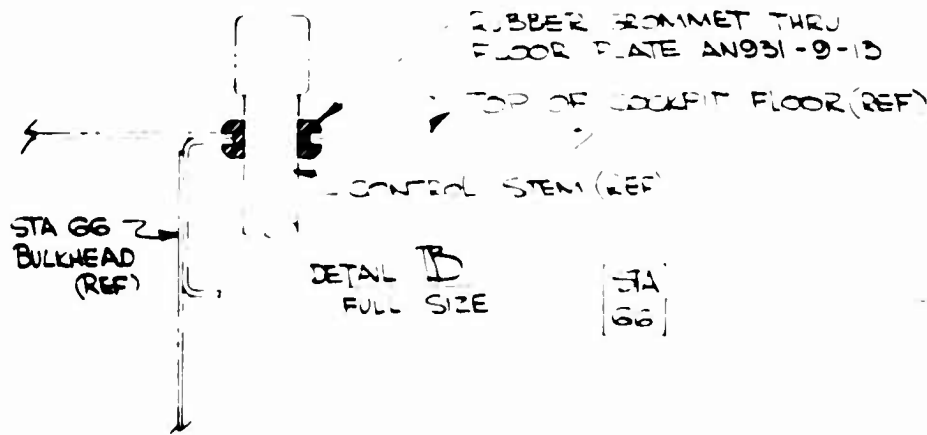
ING FORWARD
STA. 66 BLKD
CRAFT ONLY
HU-1A EXCEPT
D

B

INDICATES REPLACING EXISTING RIVETS WITH
AD5, DRILL THRU DOUBLERS HU-1-14-1 & 2.

INDICATES REPLACING EXISTING RIVETS WITH
AD5, DRILL THRU & CSK (NEAR SIDE) OF
R HU-1-14-2.

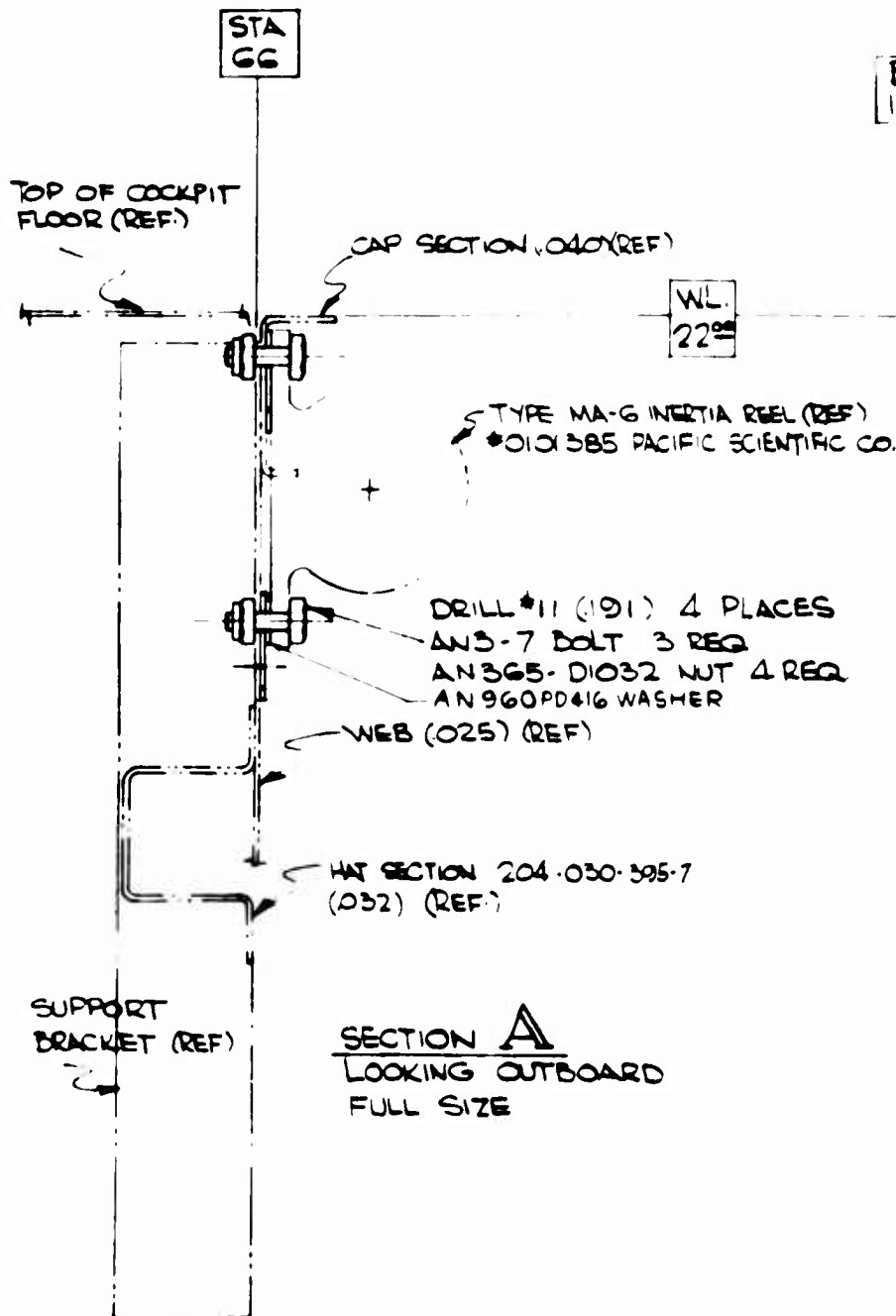
INDICATES NEW AN470AD4 RIVET, DRILL
DOUBLER HU-1-14-1



SUPPORT B
204-030

812 DIA CLEARANCE HOLE FOR CONTROL STEM THRU CAP ANGLE AND FLOOR PLATE
SEE DETAIL B

B.L. 14⁰⁰



HU 1-14-3 DOUBLER

CUT BACK LOWER FLANGE OF CAP SECTION 1.10' APPROX AS NECESSARY TO CLEAR REEL HOUSING

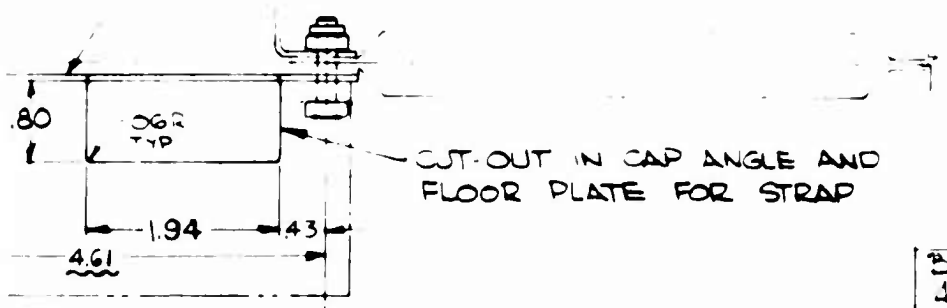
AN 3-25 BOL AN 960PD416

VIEW LOOKING 1/4 R.H. SIDE ONLY
HU-1A AIRCRAFT

A

BRACKET
O-395 (REF)

HU-1-14-3 (REF)

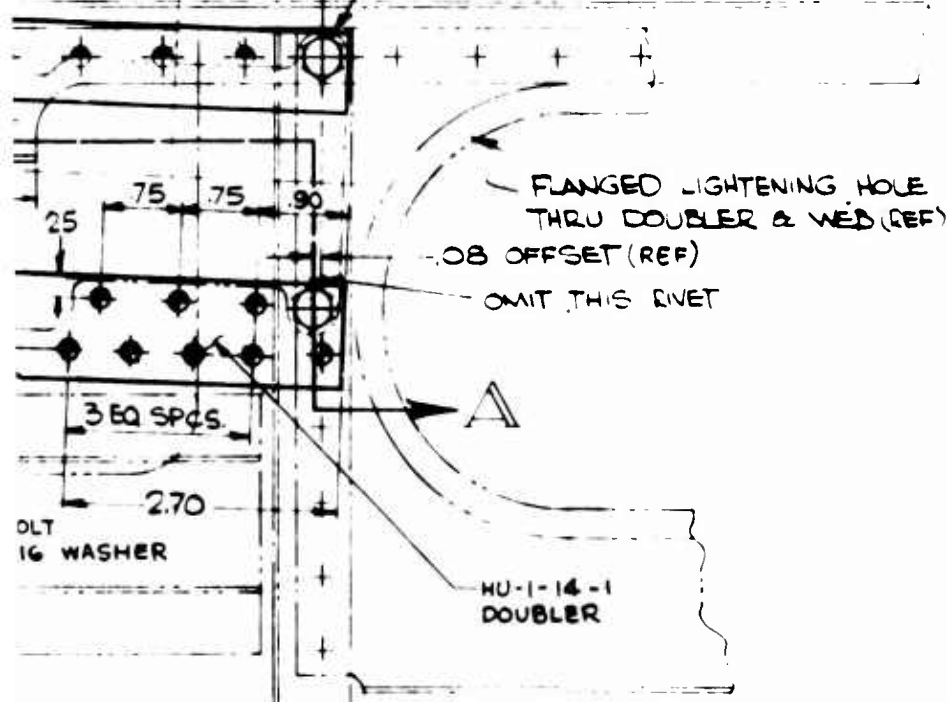


BL 22.12 APPROX LEFT SIDE

2° (REF)
STRAP (REF)
BOLT

2 OFFSET

THIS BOLT TO BE LOCATED IN EXISTING RIVET HOLE



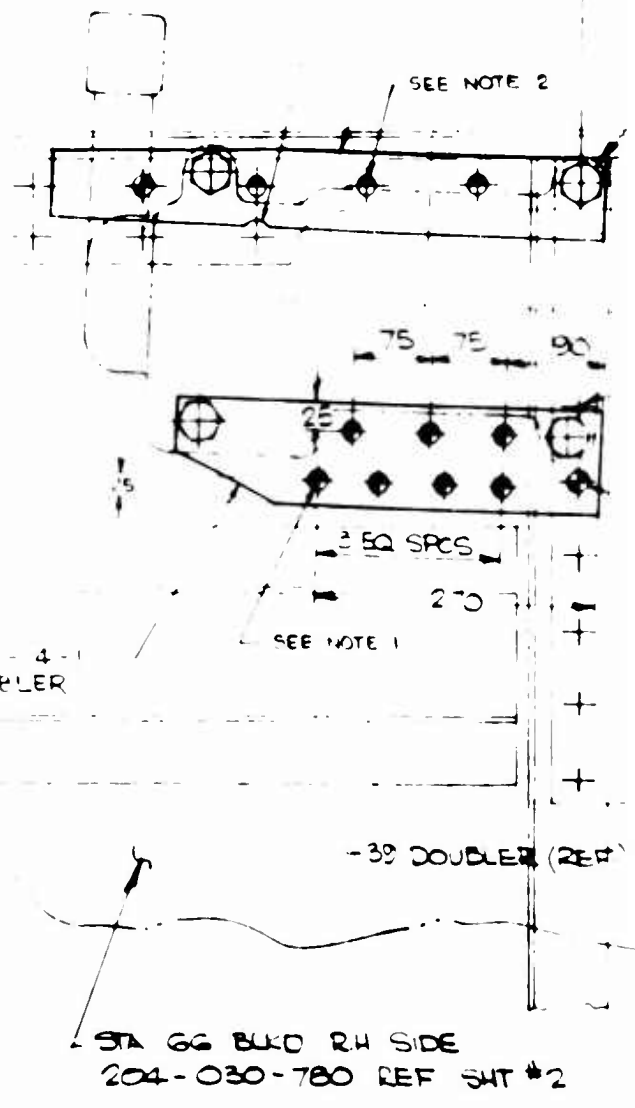
- STA 66 BLKD R.H SIDE
204-030-780 REF SHT #1

FORWARD
Y
FT ONLY

DRILL THRU DOUBLER
HOLE REF TO
EXISTING RIVET
SPACING

BL
22.12

BL
100

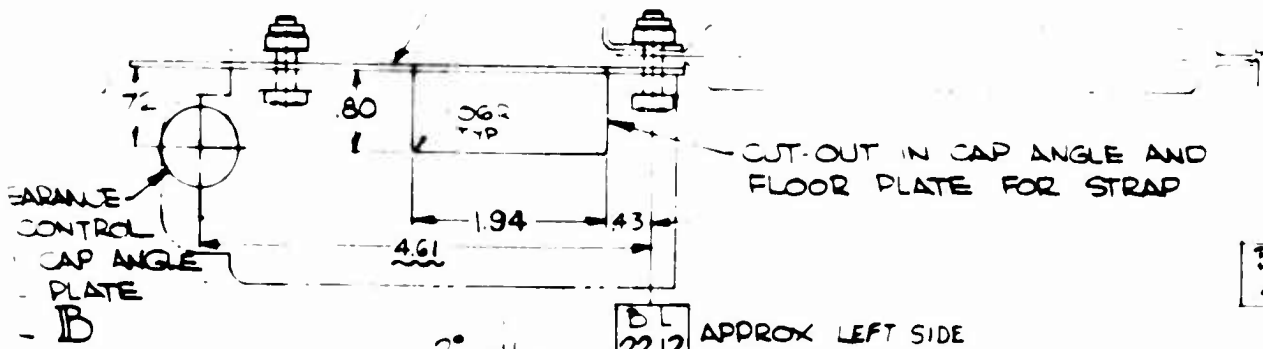


- 3 SYMBOL INDICATES REPLACING EXISTING RIVETS WITH AN AN4 DRILL THRU DOUBLERS HU-1-4-1 #3.
- 2 SYMBOL INDICATES REPLACING EXISTING RIVETS WITH AN AN4 DRILL THRU #2SK (NEAR SIDE OF DOUBLER HU-1-14-3)
- 1 SYMBOL INDICATES NEW AN470AD4 RIVET, DRILL THRU DOUBLER HU-1-14-1 (AS SHOWN).

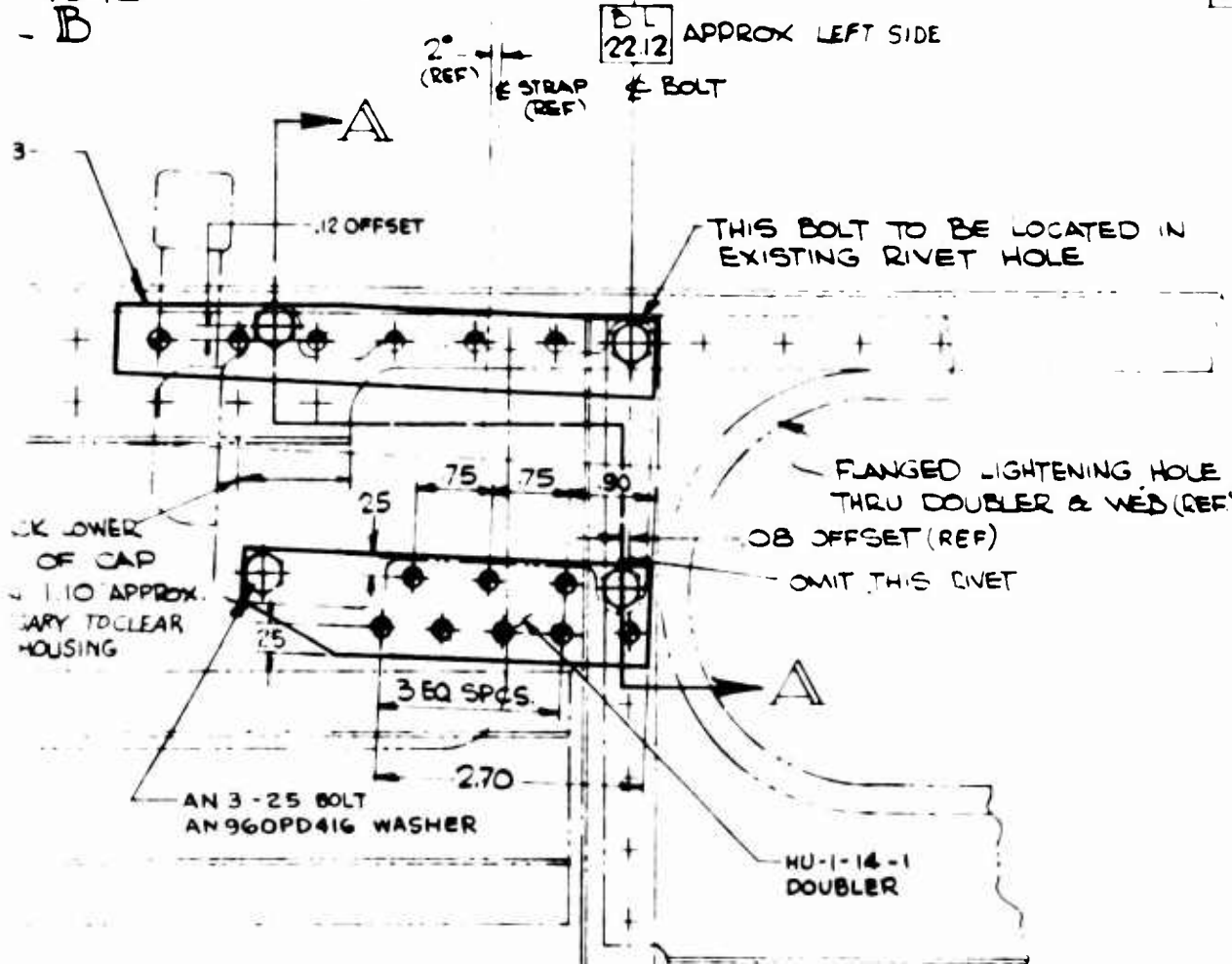
NOTES:

SUPPORT BRACKET
204-030-395 (REF)

HU-1-14-3 (REF)



B L
400



VIEW LOOKING FORWARD
R.H. SIDE ONLY
HU-1A AIRCRAFT ONLY

STA 66 BLKD R.H. SIDE
204-030-780 REF SH#1

HU-1-14-1
DOUBLER

HU-1-14-1
DOUBLER

- 3. SYMBOL INDICATES DRILL THRU DOUBLE
- 2. SYMBOL INDICATES DRILL THRU & CSK
- 1. SYMBOL INDICATES DOUBLER HU-1-14-1

NOTES:

1470
136A

QUANTITY
 TO REF
 MATERIAL SPEC
 REFERENCE

B.L. APPROX RIGHT SIDE
 22.12

THIS BOLT TO BE LOCATED
 IN EXISTING RIVET HOLE

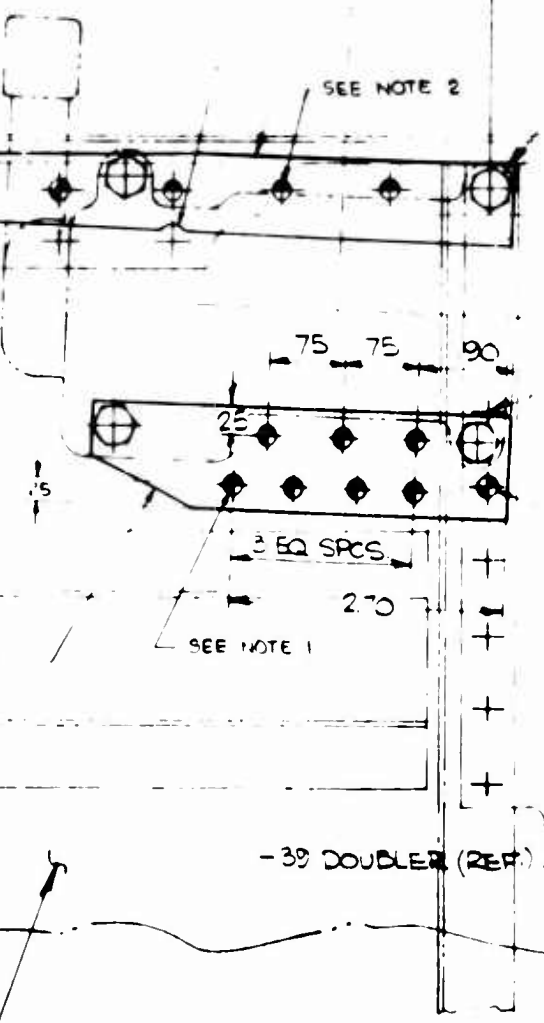
CAP EXTRUSION - 35
 ALCOA # 26846 (REF)

WL
 22.12

SEE NOTE 2

OMT THIS RIVET

WEB (.025 REF) - 33



SEE NOTE 3

VIEW LOOKING FORWARD
R.H. SIDE ONLY
HU-1B AIRCRAFT ONLY
 (MOUNTING HARDWARE SAME AS HU-1A)

SEE NOTE 1

-33 DOUBLER (REF)

STA 66 BKD RH SIDE
 204-030-780 REF SMT #2

REPLACING EXISTING RIVETS WITH AN470ADS,
 (NEAR SIDE) OF DOUBLER HU-1-14-1 & -3.

REPLACING EXISTING RIVETS WITH AN426ADS,
 (NEAR SIDE) OF DOUBLER HU-1-14-3.

NEW AN470AD4 RIVET, DRILL THRU
 4-1 (AS SHOWN).

B

FRAMES

SEAT ASSEM & INSTALL
PILOT & CO-PILOT
204-070-700 (REF)

SEAT - POSITION
(REF) FULL FWD - FULL UP

AN3-10A BOLT (2)
AN363-1032 NUT (2)
AN260PD10 WASHER (3)
THRU EXISTING HOLE
IN SEAT BUCKET

RELOCATE THIS BOLT
TO POSITION SHOWN

SEAT - POSITION
FULL DOWN - FULL FWD (REF)

TOP OF COCKPIT FLOOR
(REF.)

STA 66

STA 4122 APPROX (REF)
SEAT FULL FWD
(AGAINST STOP)

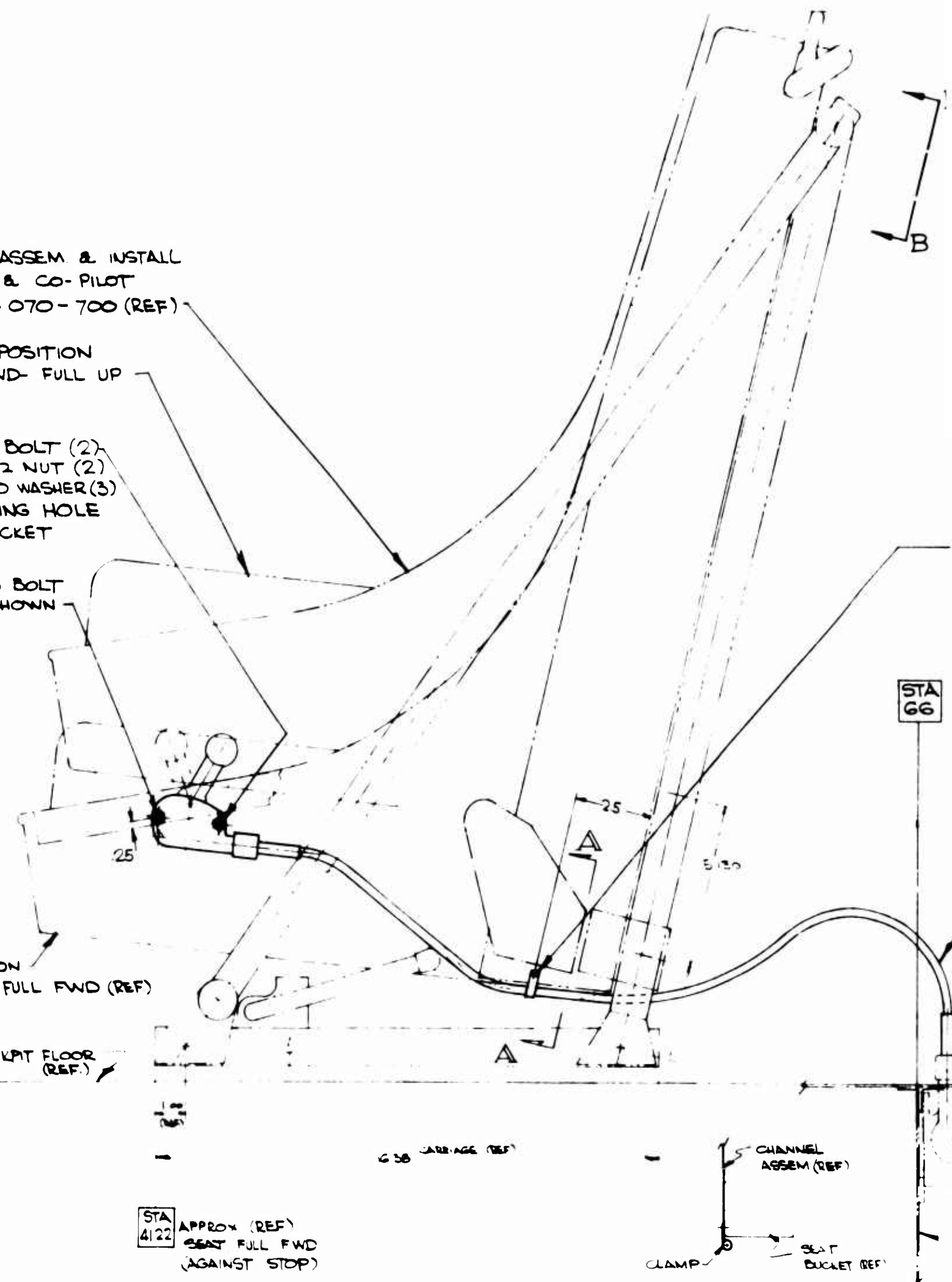
G 36 CARRIAGE (REF)

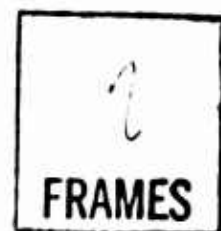
CHANNEL
ASSEM (REF)

CLAMP

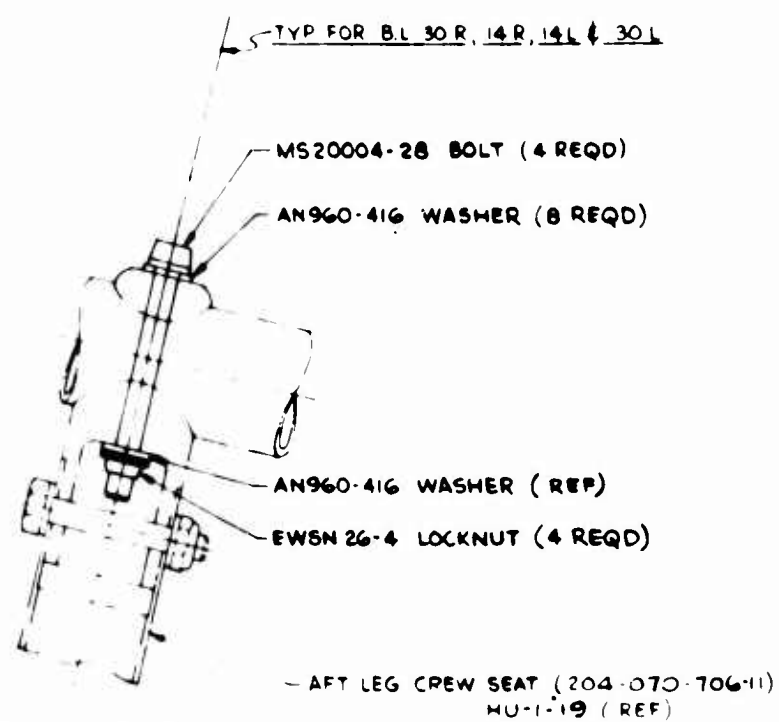
SEAT
BUCKET (REF)

VIEW A





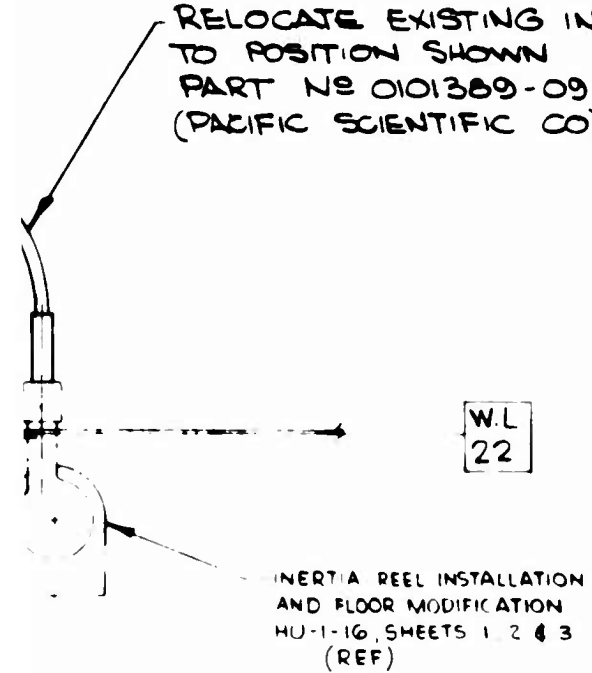
7B



VIEW B-B
SCALE - 1/2
(REPLACES EXISTING HARDWARE)
LOOKING FWD

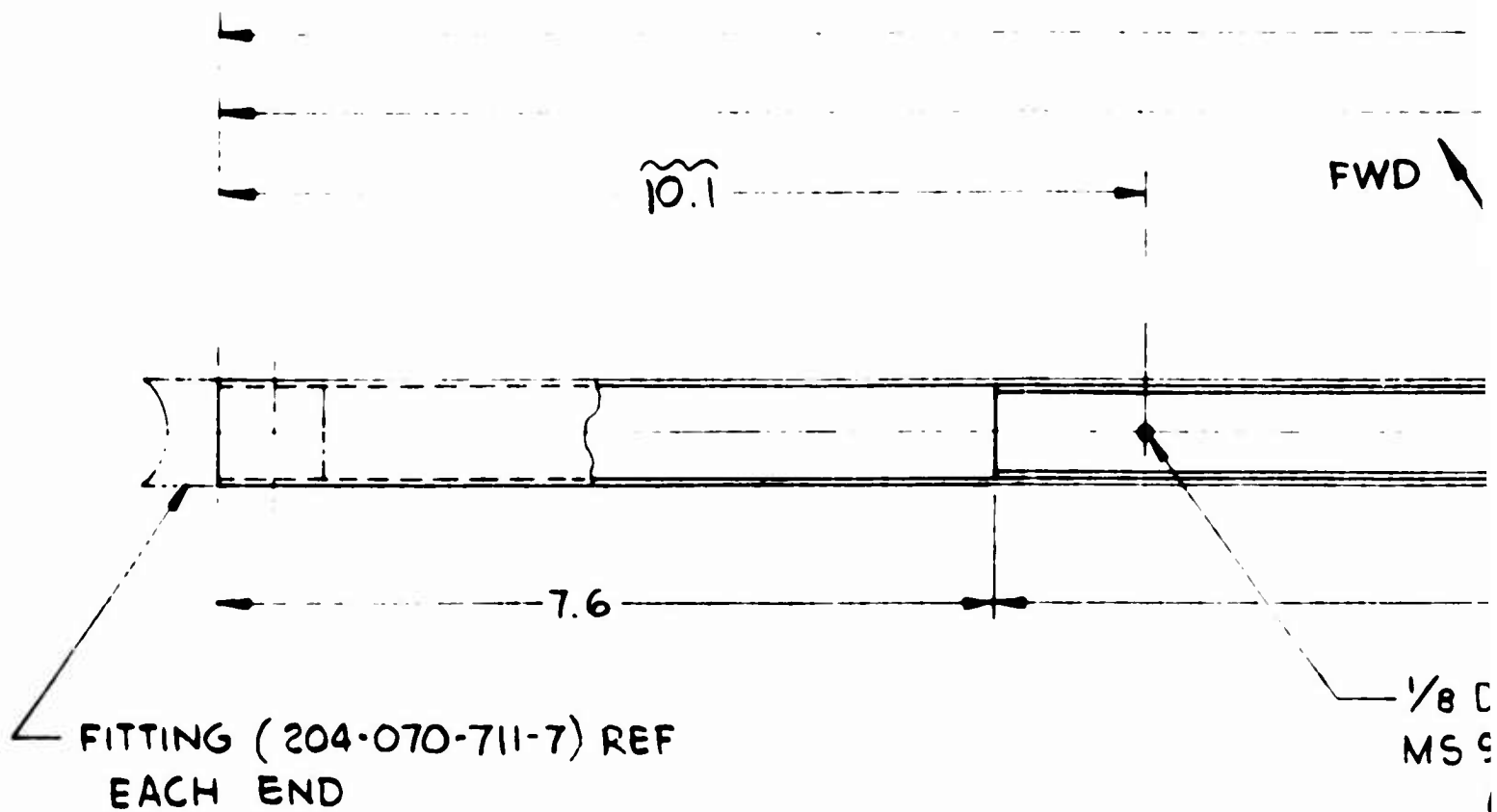
MOVE EXISTING CLAMP
TO THIS LOCATION
AN742 - 4 CLAMP
AN520-10RG SCREW
AN960-416 WASHER
AN363-1052 NUT
(REF.)

RELOCATE EXISTING INERTIA CONTROL ASSEM.
TO POSITION SHOWN
PART NO 0101389-09 (REF)
(PACIFIC SCIENTIFIC CO)



W.L
22

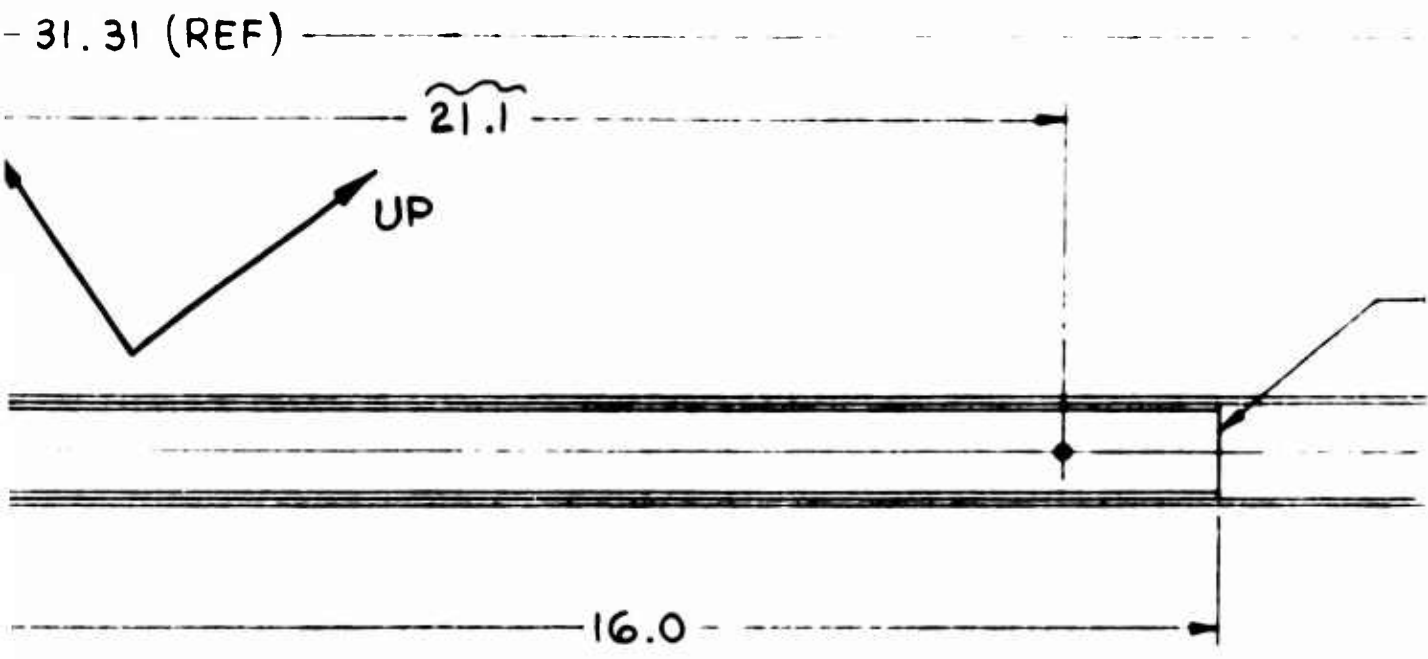
BULKHEAD STA 20
204-030-780 (REF)



FINISH:

ZINC CHROMATE REINFORCEMENT TUBE (DETAIL -1)
 ALL OVER BEFORE DRILLING. SPRAY PAINT DRILLED HOLES.

A



10.1

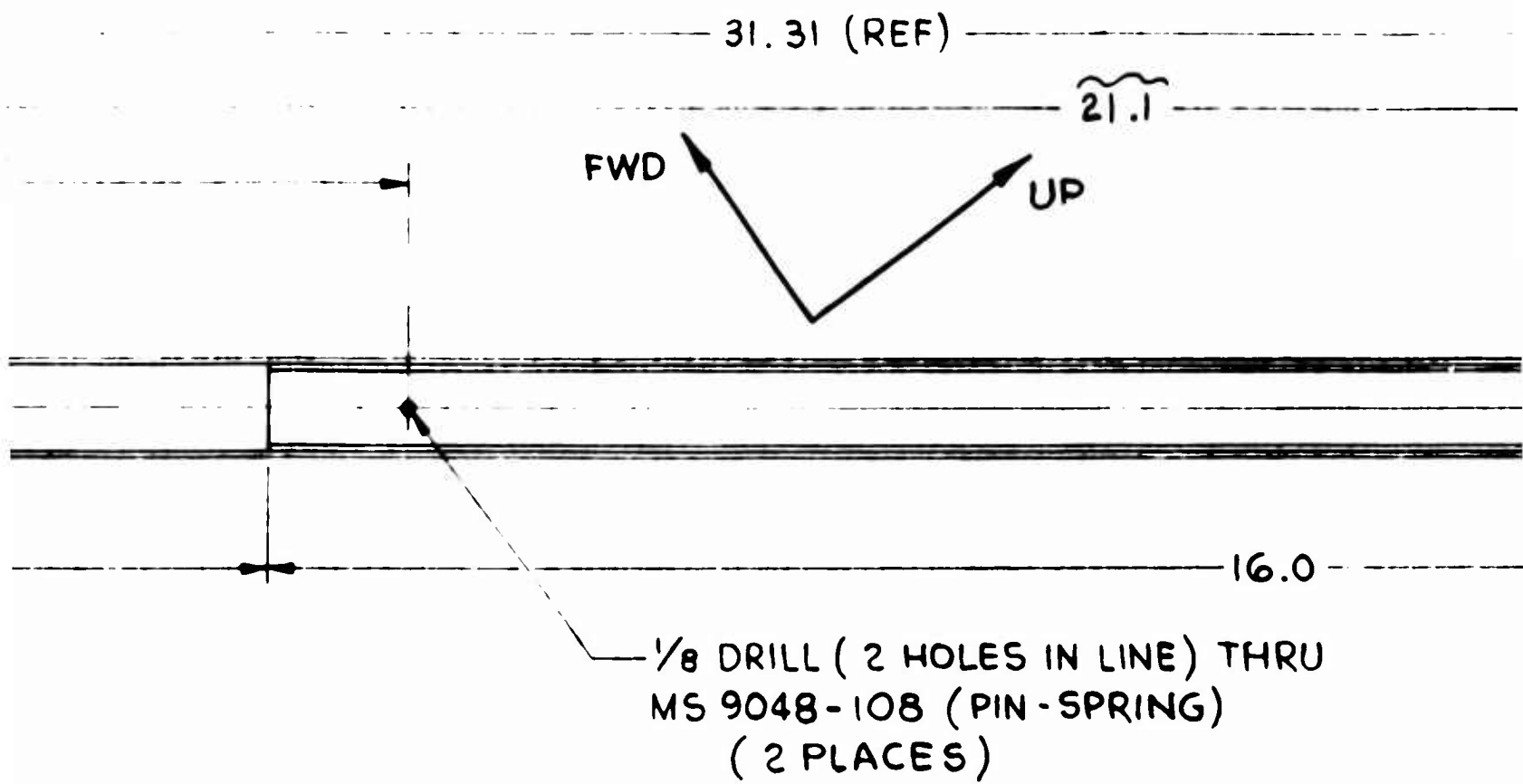


DRILL (2 HOLES IN LINE) THRU
 9048-108 (PIN-SPRING)
 (2 PLACES)

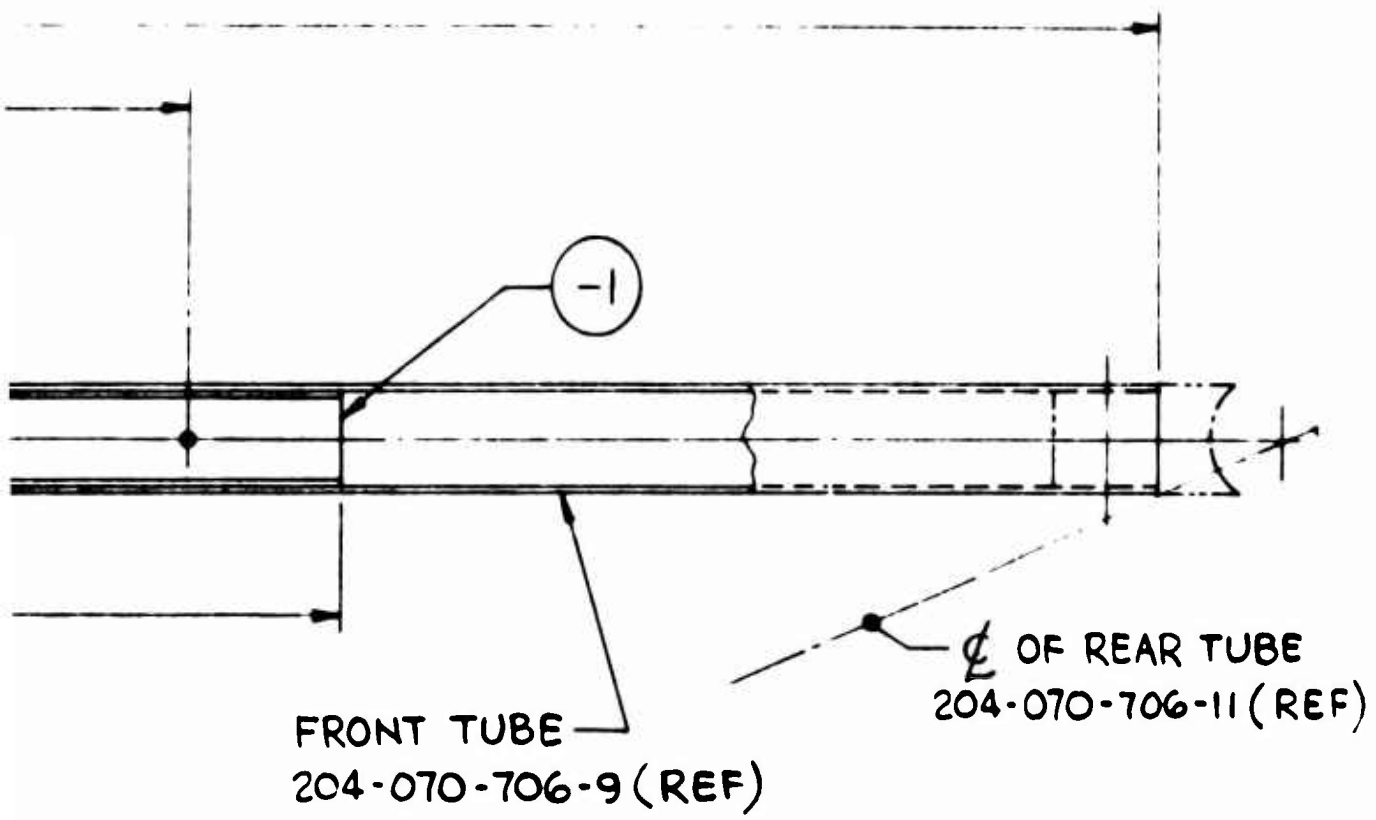
FRONT TUBE
 204-070-706

REF

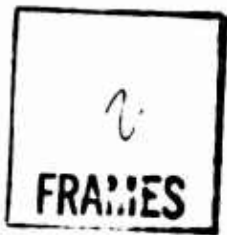
EMENT
 G. SP



I TUBE (DETAIL -1)
PRAY PAINT DRILLED HOLES.



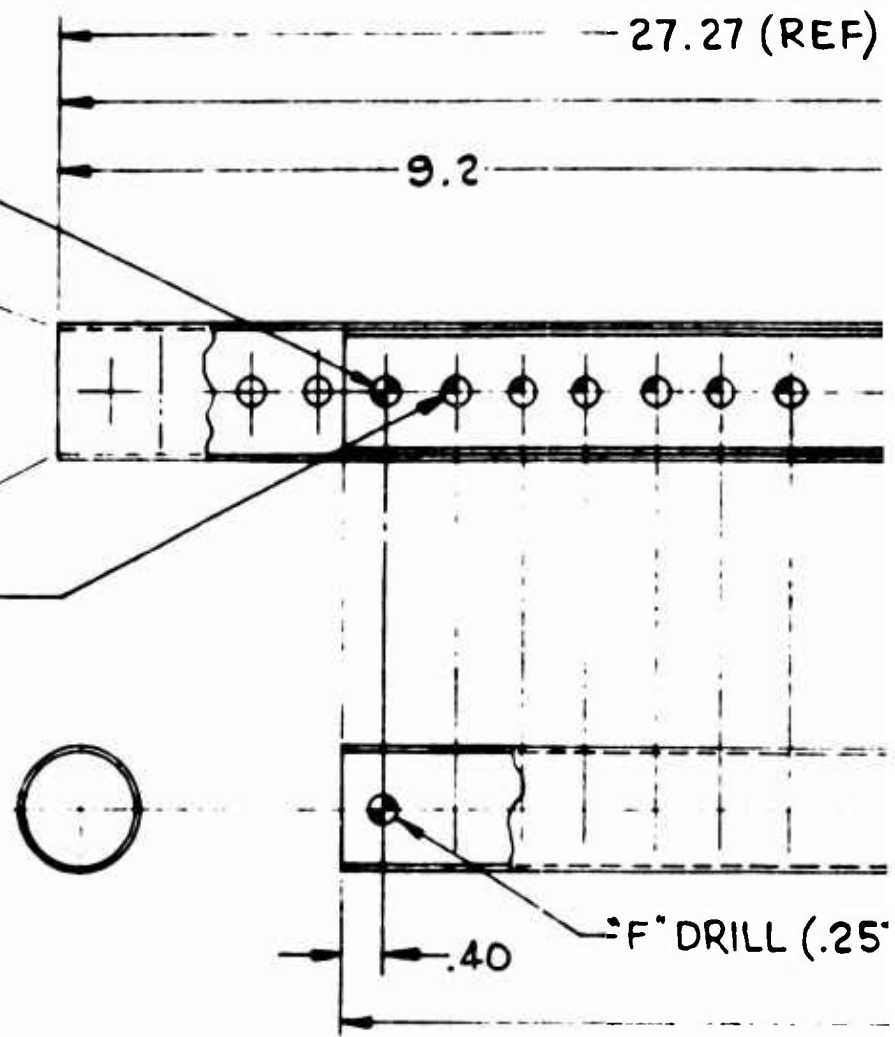
B



ALIGN HOLE $\frac{7}{8}$ "
WITH EXISTING
MATING HOLE

FITTING HU-1-12
(REF, MODIF. OF
204-070-742-1)

$\frac{1}{8}$ " DRILL (.257) FAR SIDE,
THRU DETAIL-1 ONLY
MATCH EXISTING HOLES
(6 PLACES)



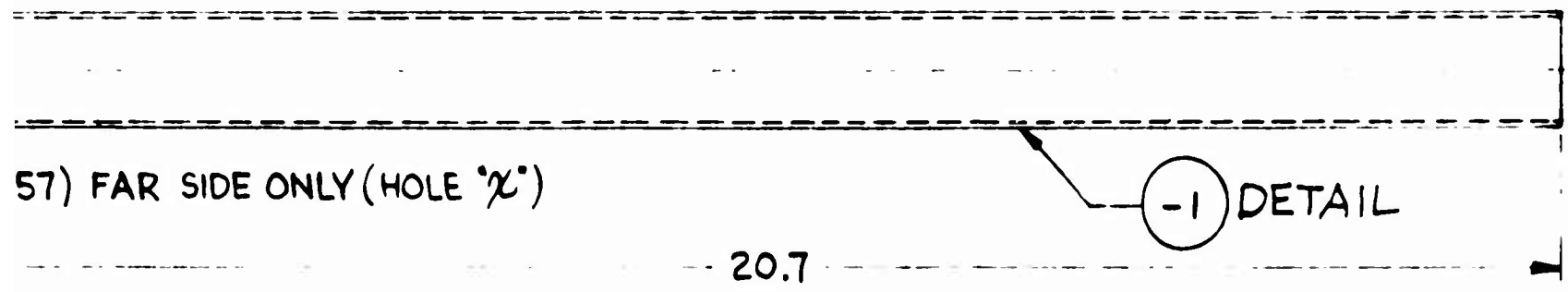
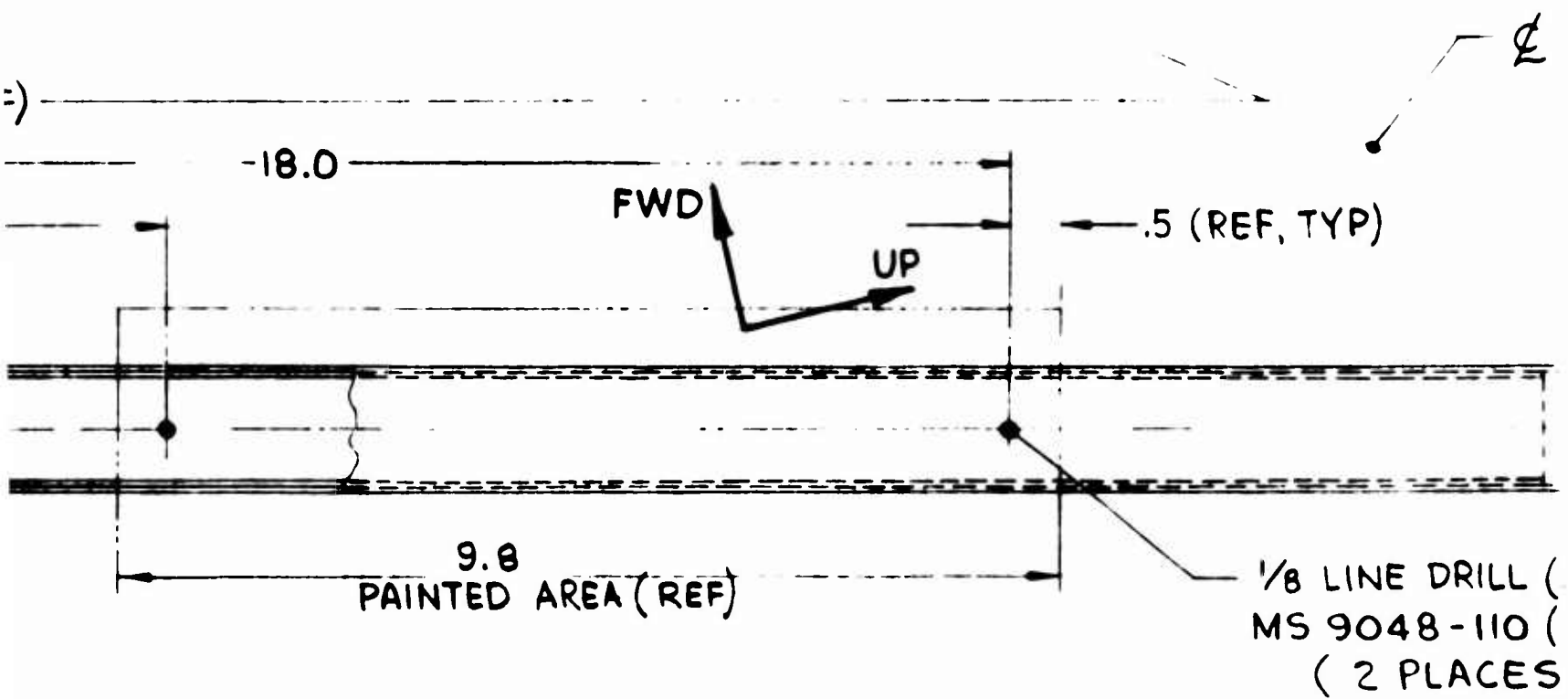
INSTALLATION PROCEDURE

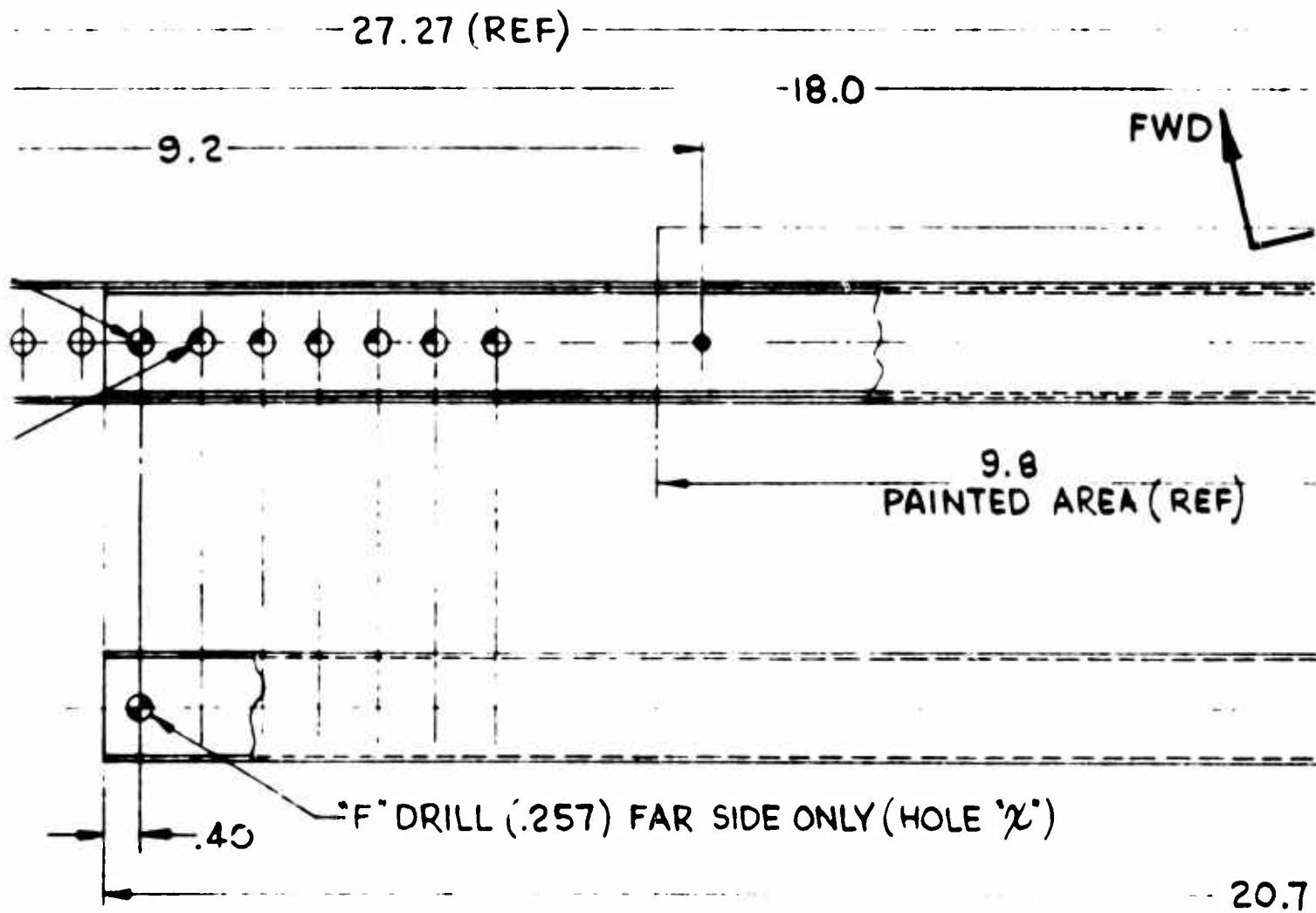
- (a) ALIGN HOLE $\frac{7}{8}$ " AS SHOWN
- (b) PIN IN PLACE (2 PLACES).
- (c) MATCH DRILL 6 HOLES AS SHOWN.
- (d) ZINC CHROMATE ALL EXPOSED SURFACES (DUE TO DRILLING)

FINISH :

A

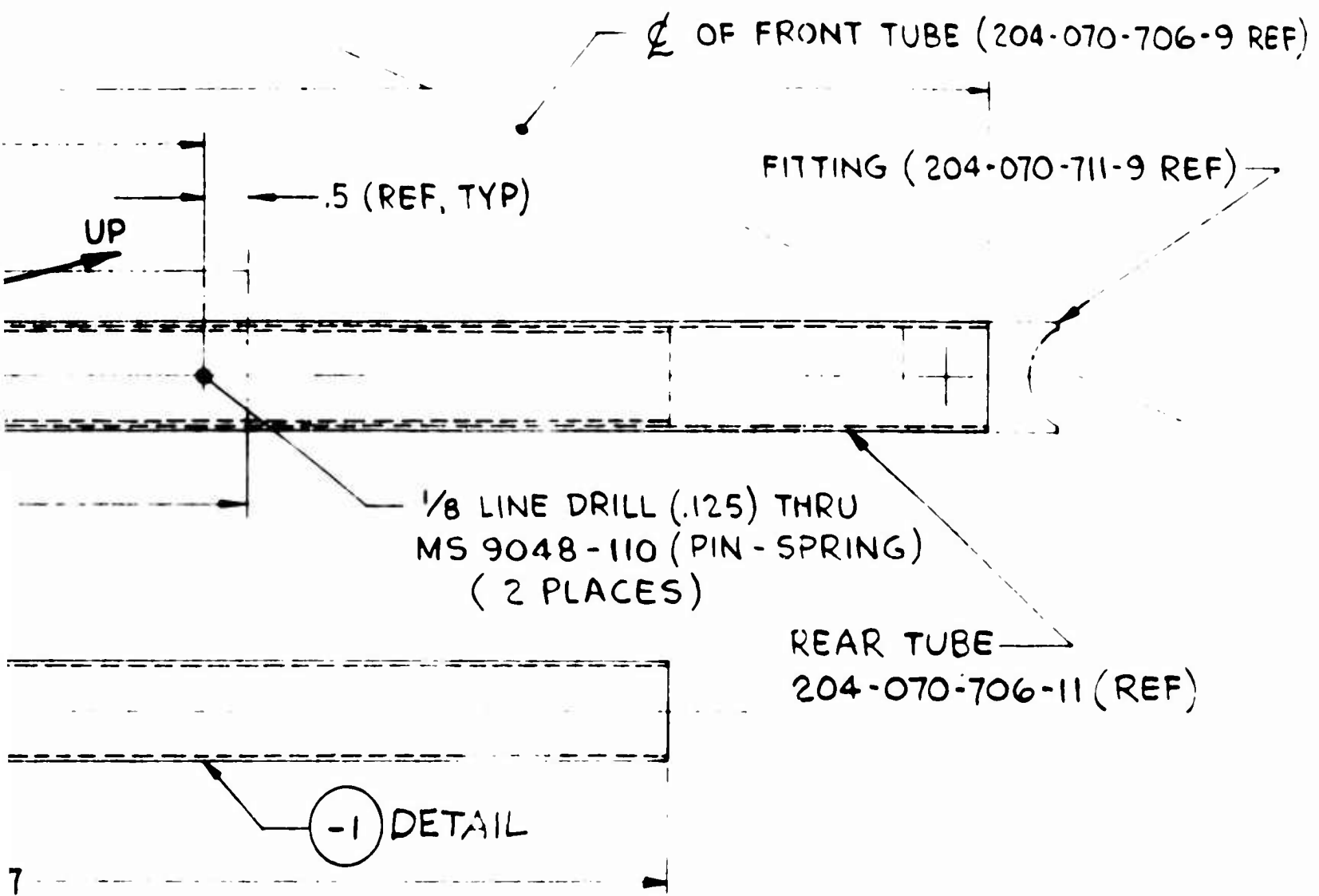
ZINC CHROMATE REINFORCEMENT TUBE
ALL OVER BEFORE DRILLING.





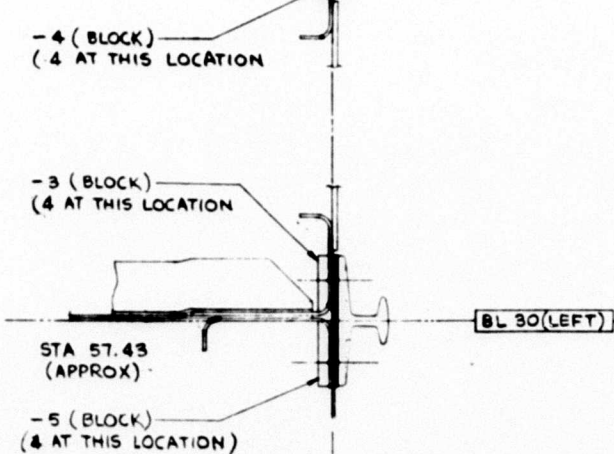
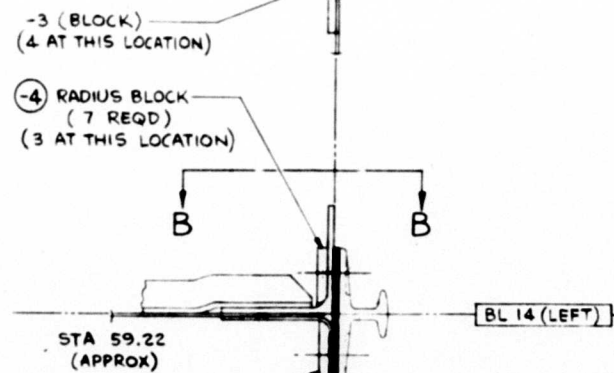
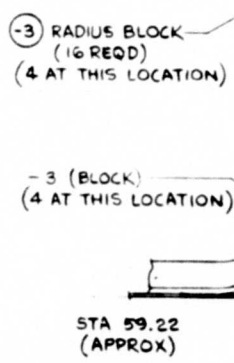
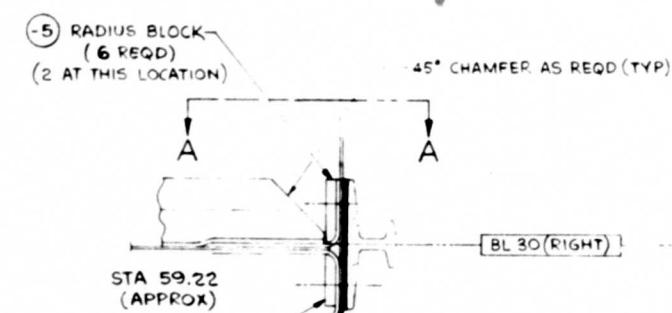
ES (DUE TO DRILLING)

NT TUBE



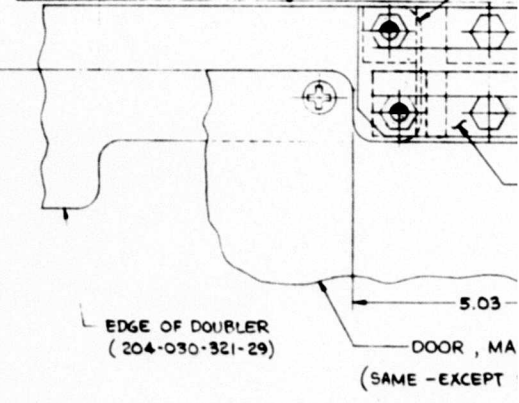
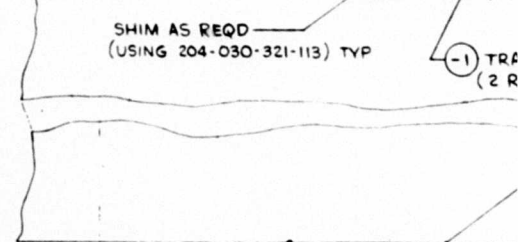
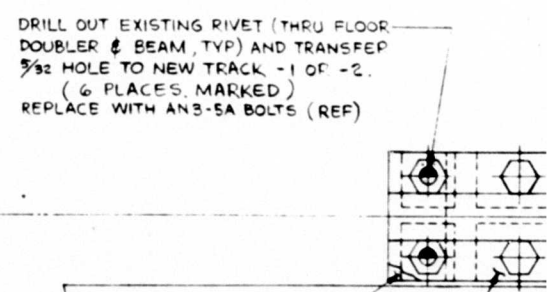
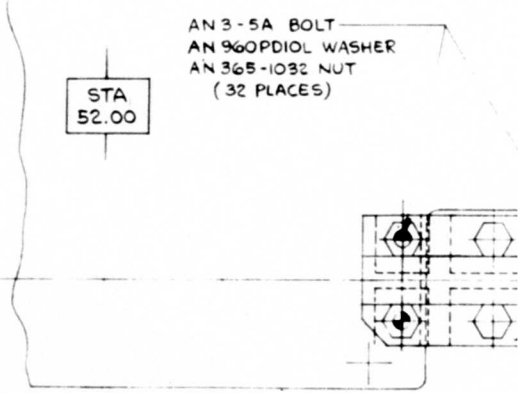
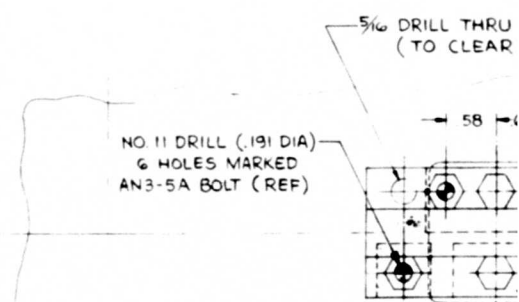
E

2
FRAMES

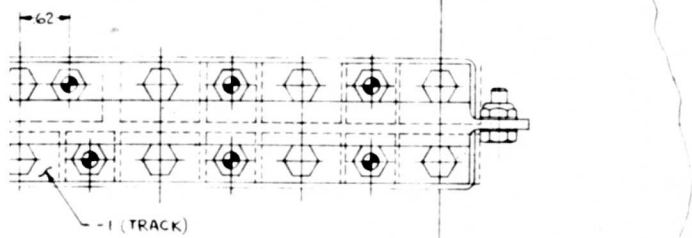


WL 22.00

A

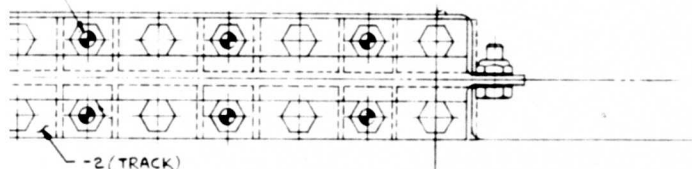


RU TRACK BASE ONLY
AR EXISTING RIVET HEAD)



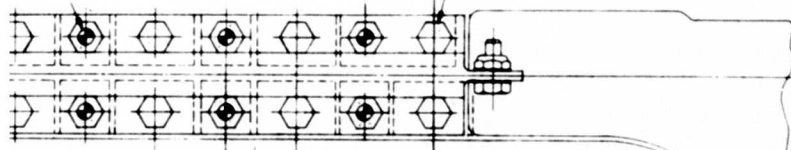
FWD ←

STA 61.86

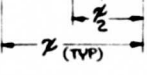


AFTER LOCATING HOLES AS SHOWN
DRILL 1/8 PILOT HOLES IN TRACK.
POSITION TRACK IN PLACE (USING
AT LEAST 4 BOLTS ON EACH TRACK)
THEN DRILL THRU TRACK, FLOOR,
DOUBLER & BEAM USING NO. 11 DRILL
(.191 DIA) 26 PLACES MARKED

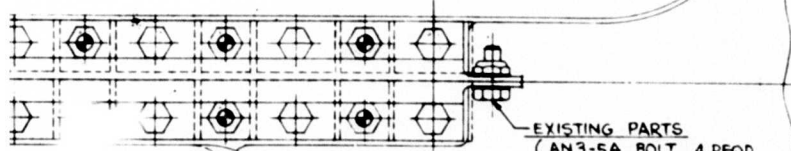
EXISTING BOLTS
USE AT LEAST 4
TO LOCATE TRACK
BEFORE FINAL
MATCH DRILLING.
(EACH TRACK)



TRACK
2 REQD

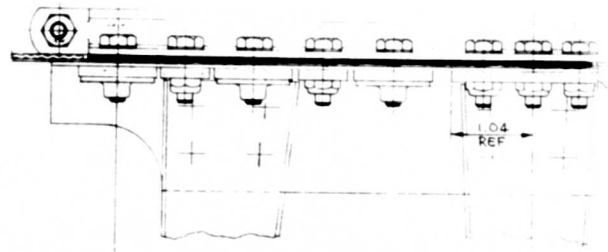


EDGE OF FLOOR (204-030-321-25)



EXISTING PARTS
(AN3-5A BOLT, 4 REQD.
AN960PDIOL WASHER, 8 REQD.
AN363-1032 NUT, 4 REQD)

33
MAKE FROM 204-030-321-33 OR -45
PT 5.03 WAS 4.02)

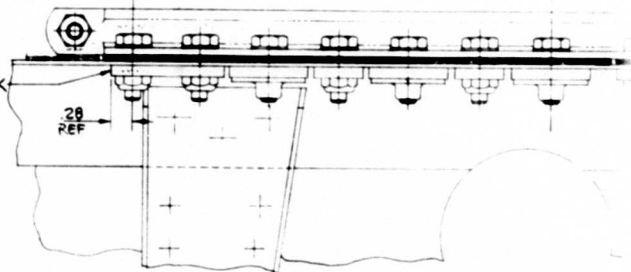


VIEW A-A BL 30 (RIGHT)
(LOOKING INBOARD)
ROTATED 90° CCW

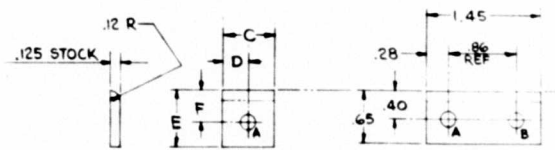
STA 61.86

STA 56.55

FWD →



VIEW B-B BL 14 (LEFT)
(LOOKING OUTBOARD)
ROTATED 90° CCW



(TYP END VIEW) DETAILS -3 THRU -7
DETAILS -3 THRU -5

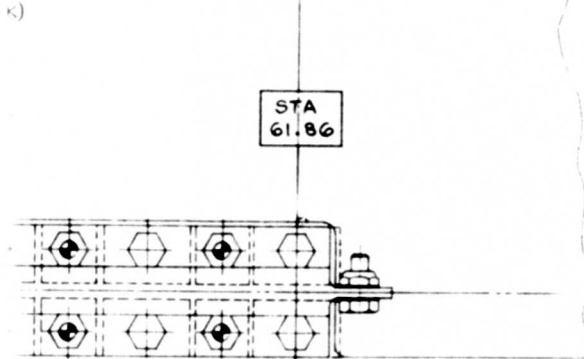
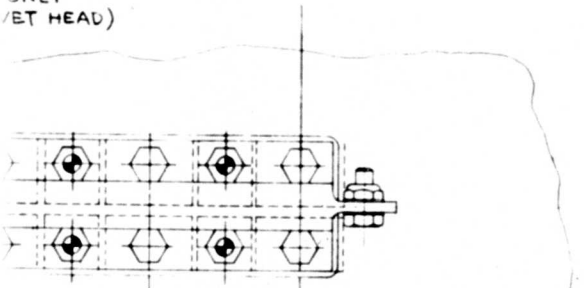
DETAIL -6

HOLE 'A' = .196 DIA
HOLE 'B' = .190 DIA

DASH NO.	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'
- 3	.66	.33	.65	.35
- 4	.66	.33	.65	.40
- 5	.66	.33	.75	.45

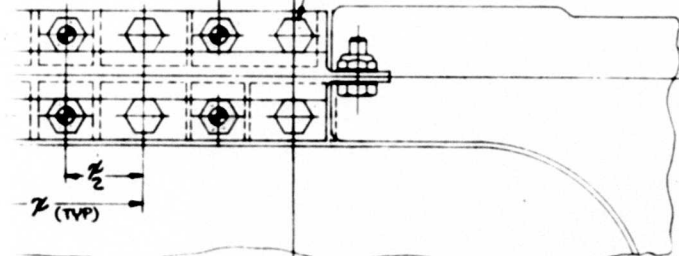
BLOCK-RADIUS DETAILS -3 THRU -

ONLY
(LET HEAD)

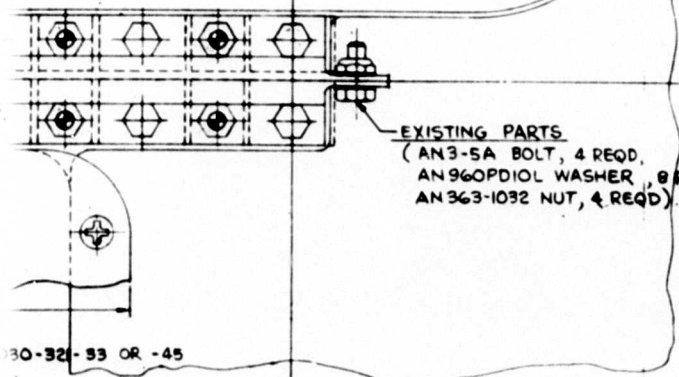


DRILLING HOLES AS SHOWN
IN TRACK.
FIT TRACK IN PLACE (USING
BOLTS ON EACH TRACK)
THRU TRACK, FLOOR,
BEAM USING NO. 11 DRILL
IN 6 PLACES MARKED.

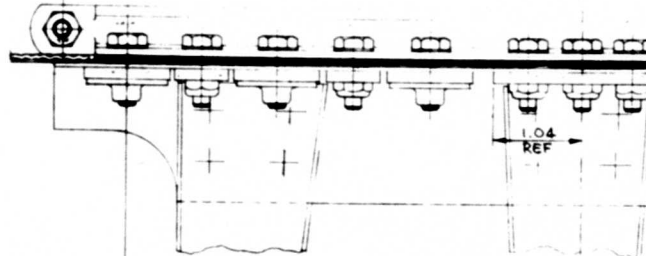
EXISTING BOLTS
USE AT LEAST 4
TO LOCATE TRACK
BEFORE FINAL
MATCH DRILLING.
(EACH TRACK)



OR (204-030-321-25



30-32-33 OR -45



VIEW A-A BL 30 (RIGHT)
(LOOKING INBOARD)
ROTATED 90° CCW

STA 61.86

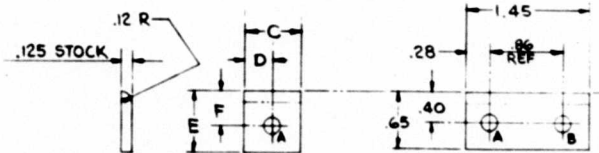
STA 56.55

FWD →



VIEW B-B BL 14 (LEFT)
(LOOKING OUTBOARD)
ROTATED 90° CCW

⊖6 RADIUS BLOCK



(TYP END VIEW)

-3 THRU -7

DETAILS

-3 THRU -5

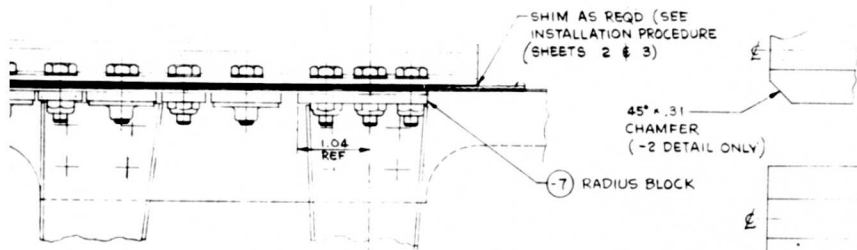
DETAIL -6

HOLE 'A' = $\frac{.196}{.190} D$

HOLE 'B' = $\frac{.196}{.190} D$

DASH NO	DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'
- 3	.66	.33	.65	.35
- 4	.66	.33	.65	.40
- 5	.66	.33	.75	.45

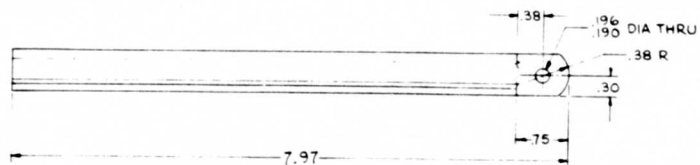
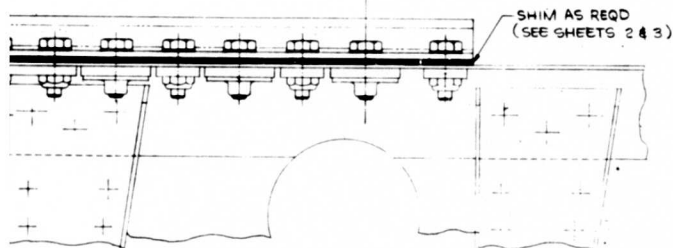
BLOCK-RADIUS DETAILS -3 THRU



VIEW A-A BL 30 (RIGHT)
(LOOKING INBOARD)
ROTATED 90° CCW

STA
5655

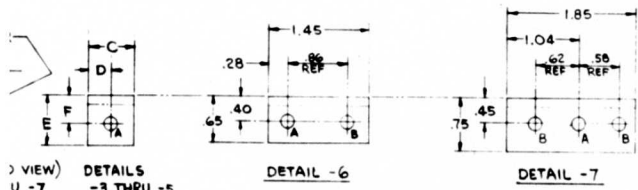
FWD →



TRACK-REAR DETAILS -1 & -2
DETAILS -1 & -2 SAME EXCEPT -2 HAS CHAMFER

△ TOTAL LENGTH OF NEW REAR TRACKS WEIGH	.807 LBS
" " " " EXISTING REAR TRACKS WEIGH	.573 LBS
	234

VIEW B-B BL 14 (LEFT)
(LOOKING OUTBOARD)
ROTATED 90° CCW



HOLE 'A' = .196 / .190 DIA THRU ON DETAIL
HOLE 'B' = .196 / .190 DIA THRU, MATCH DRILL AT ASSY.

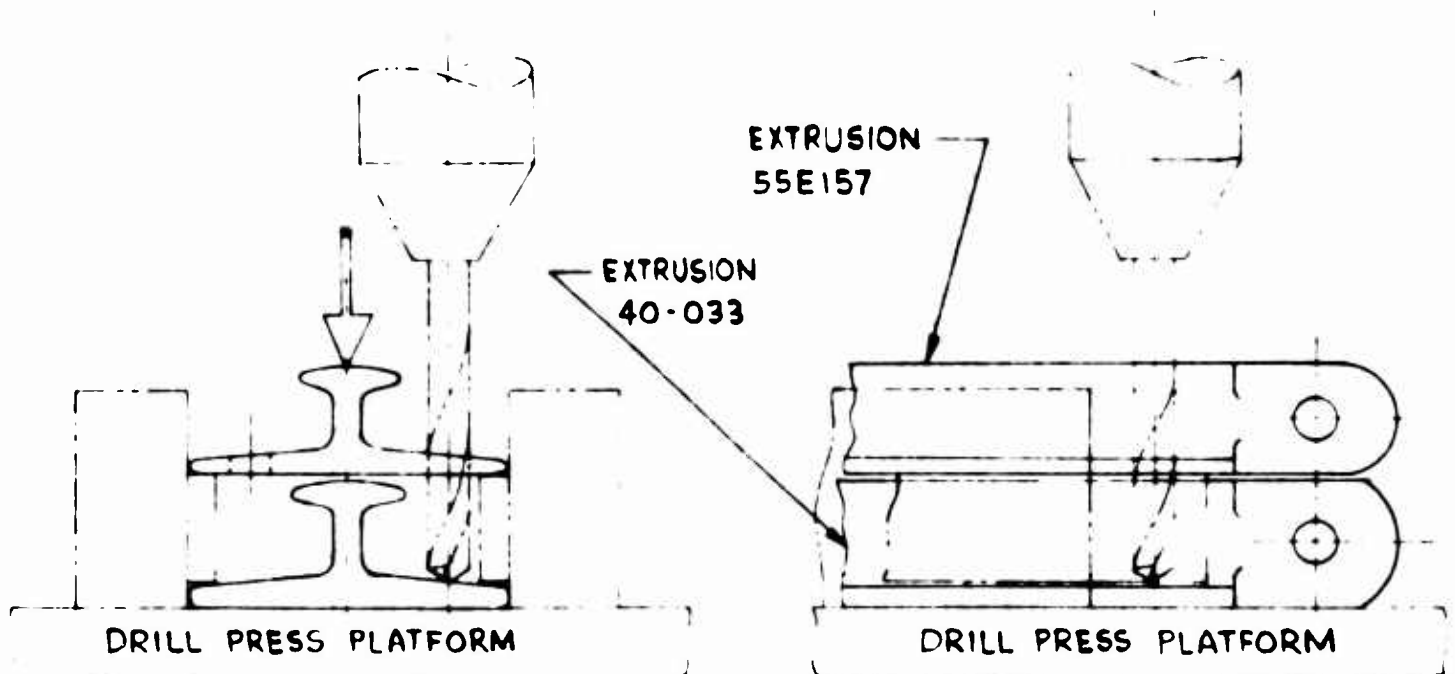
DIM 'C'	DIM 'D'	DIM 'E'	DIM 'F'
.66	.33	.65	.35
.66	.33	.65	.40
.66	.33	.75	.45

B




TRACK-RADIUS DETAILS -3 THRU -8

(FOR INSTALLATION PROCEDURE)
SEE SHEETS 2 & 3.

1. Installation Procedure - Aft Seat Tracks (Bell Std. Extrusion 40-033)
Identify and remove existing tracks (Extrusion 55E157) and match drill new tracks (Extrusion 40-033) as illustrated:



The above sketch illustrates one method of match drilling the parts, any method which ensures a perfect match of the hole pattern is acceptable. This step is very important since it will guarantee that the new tracks are located in the identical position of the existing tracks.

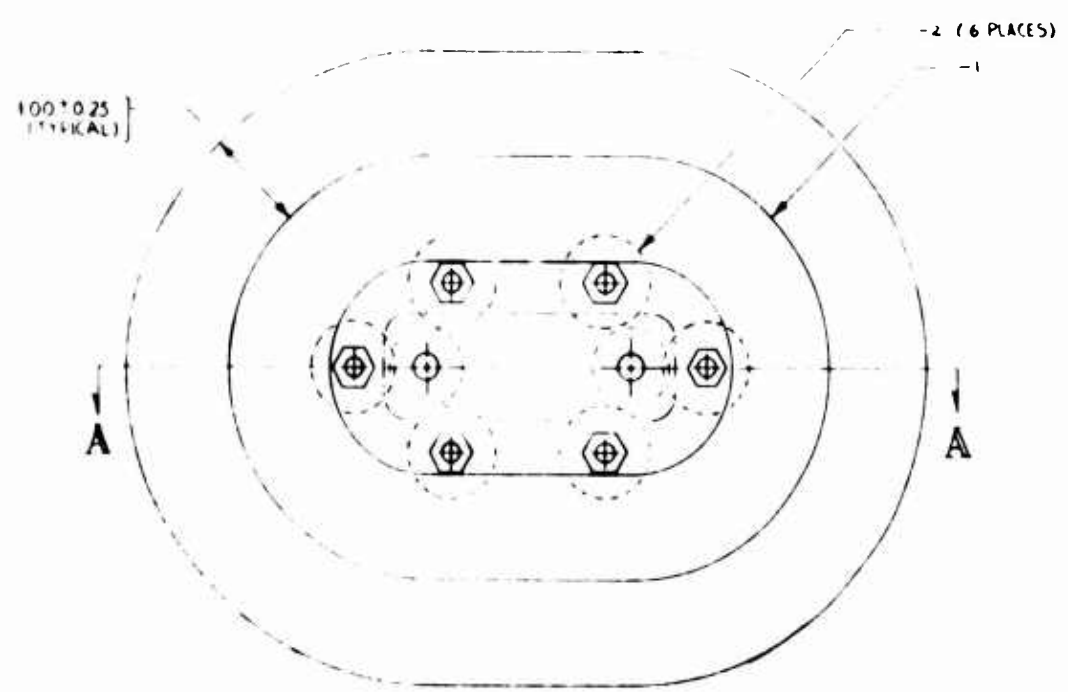
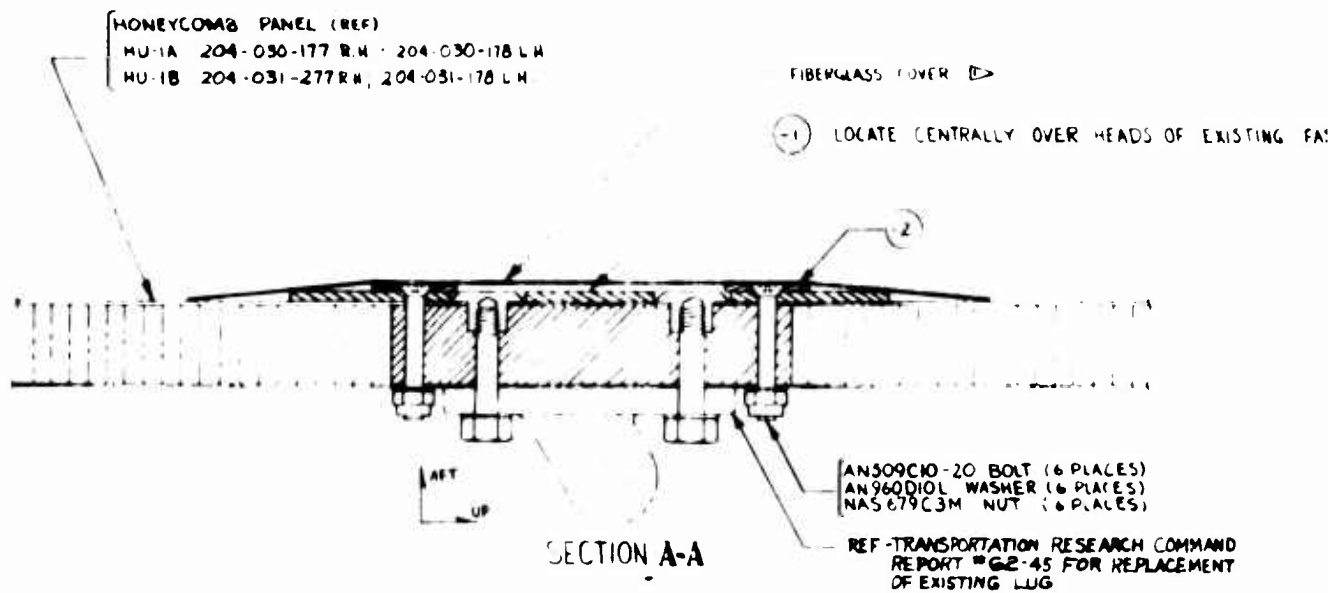
2. Identify each newly drilled track, for its intended location, for example: B. L. 30L and
3. Drill out existing rivets in floor beams in the locations indicated by the symbol  to 5/32 dia. as pilot holes.
4. (a) Drill out and remove existing nutplate (22 NA-17A-02) and radius block (204-030-165-9) at B. L. 14 (left), Station 61.86.
(b) Drill out and remove existing nutplate (NAS 680 A3) and radius block (204-030-165-5) at B. L. 30 (right), Station 56.55.
5. Position new tracks and secure snugly with at least four existing bolts and nutplates. Holes marked  to be located from beam to track and holes marked  to be checked for clearance under the beam caps.
6. Remove tracks, and pilot drill (.125 dia.) all eight new holes in each track as shown.

7. a. Due to the increased length of the new tracks, about .75 inch will overhang the embossed flooring. This may require insertion of laminated aluminum shims (.8 x 1.5) between flooring and track to insure tracks will be straight after tightening all bolts.
- b. The new tracks are .085 higher than existing tracks. The shims and fillers may be removed from under the existing rear tracks to adjust the new tracks to the same height of forward tracks, if feasible. A suggested method is the removal of the phenolic spacers (.062 thick) and .023 of the laminated shims at B. L. 30 R, 14 R, and 30 L. At B. L. 14L remove the phenolic spacer (.093 thick) and add .008 of laminated shims.

If this method is not feasible (due to clearance of floor sheet cut-outs around the tracks), the adjustment can be made by removing some spacers from the rear tracks and adding similar spacers to the forward tracks. The top of all tracks must be in the same plane within .020 in. to insure that the seat will move without binding.

8. Reposition tracks and shims and drill eight No. 11 (.191) dia. holes through the track pilot holes and underfloor beam caps.
9. Remove track, deburr and clean, dip bottom portion of track in zinc chromate solution (cover all machined surfaces). Also spray paint the drilled holes in the underfloor beam caps.
10. Install tracks using necessary shims and spacers as noted. Caution! Do not overtorque the .19 dia. bolts.

1
MES

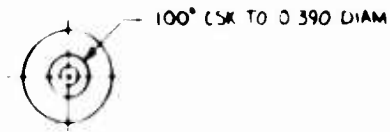


▸ TOTAL WEIGHT CHANGE
 HU-1A +1.56 LB
 HU-1B +0.78 LB

▸ USE ANY AVAILABLE FIBERGLASS MATERIAL,
 IMPREGNATE CLOTH AND BOND TO BULKHEAD
 USING EPOXY RESIN.

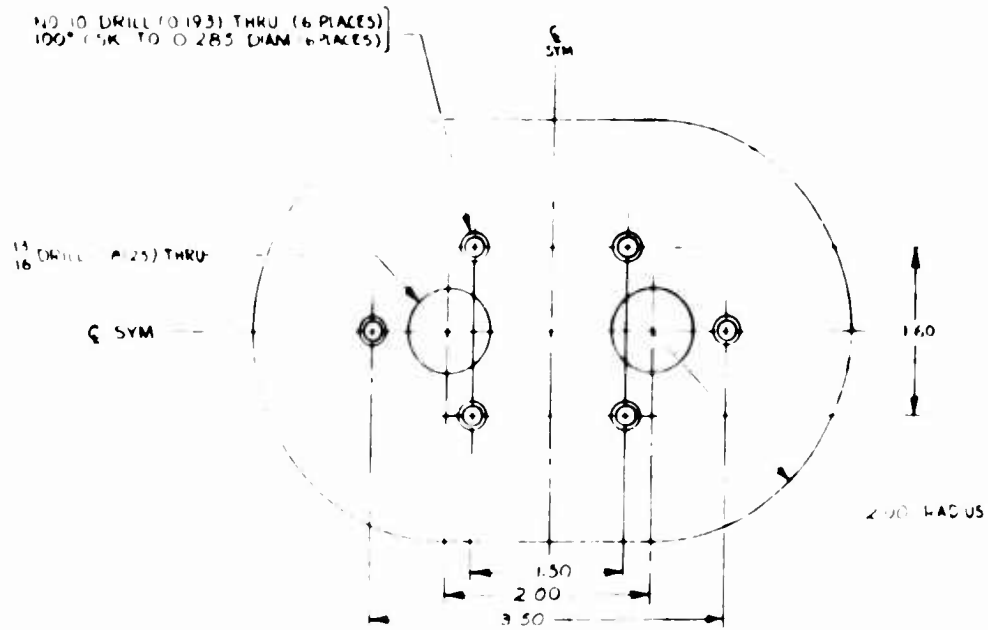
2 BOND -1 REINFORCING PLA...
 AND BOND -2 WASHER T...
 USE EPON III ADHESIVE.

1 MODIFY HU-1A 4 PLACE
 AND B.L. 3962 R.H. &
 MODIFY HU-1B 2 PLACE
 (W.L. 3268)



DETAIL -2

FASTENERS

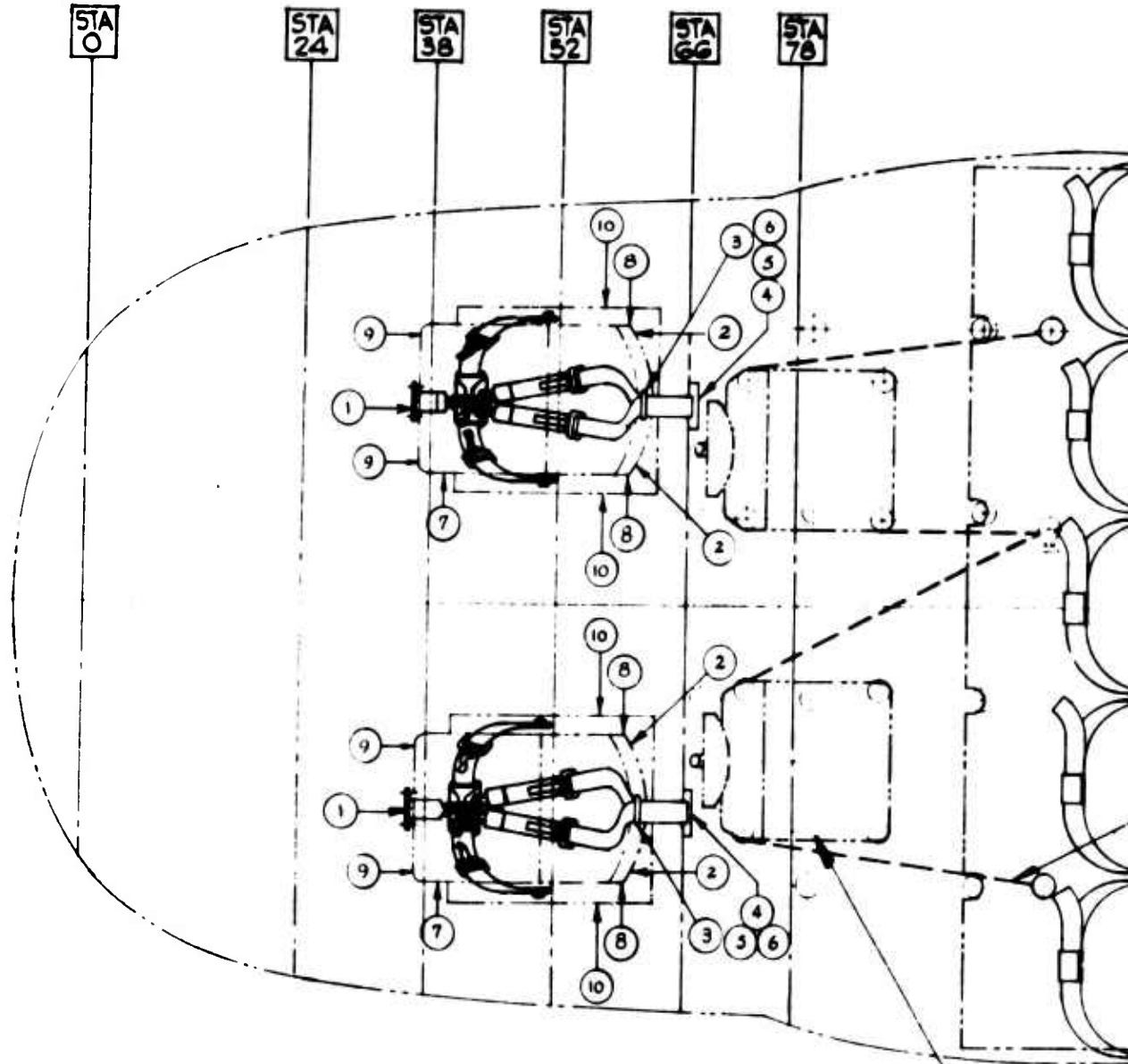


DETAIL -1

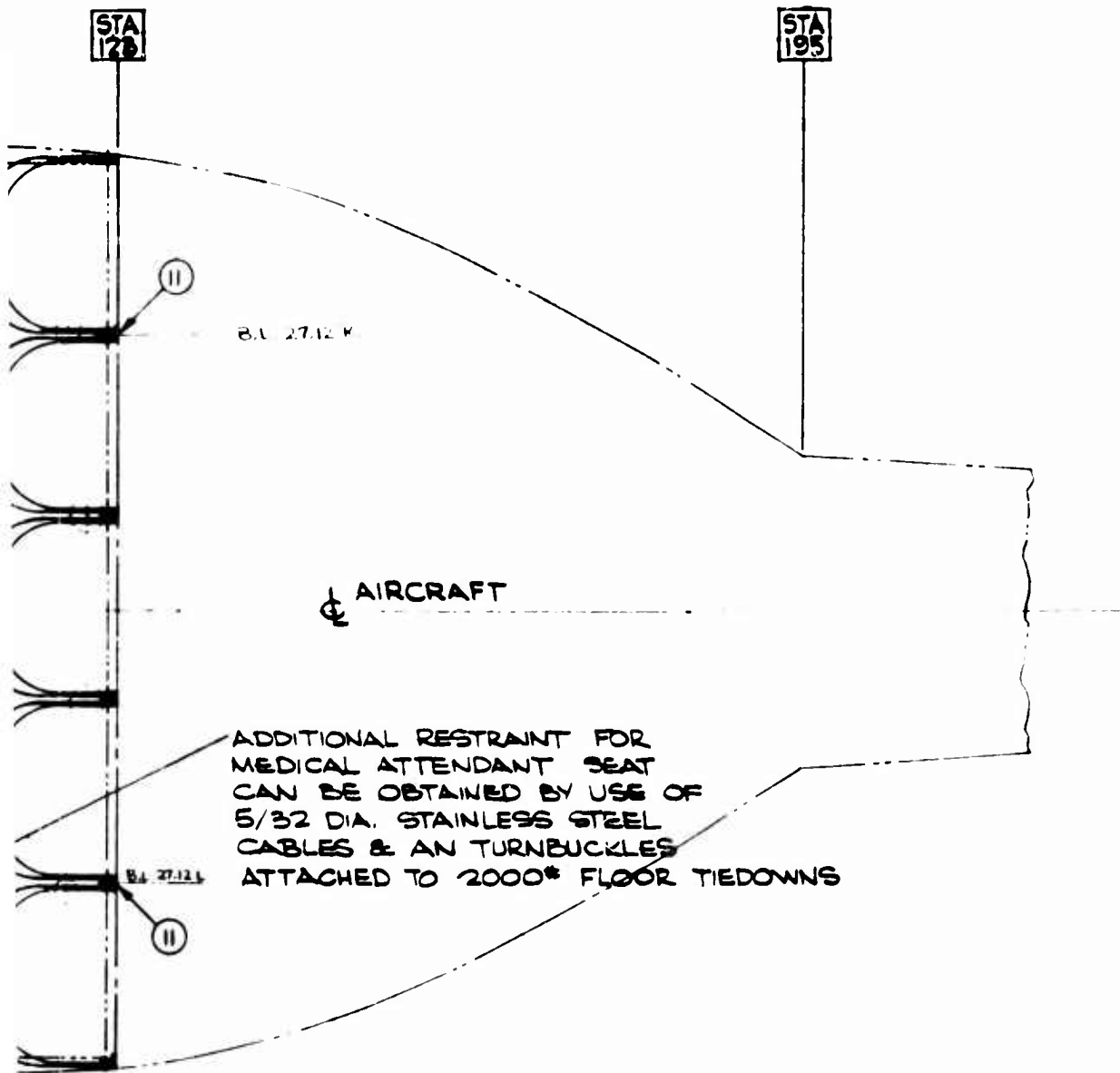
PLATE TO AFT BULKHEAD SKIN
R TO -1 PLATE, ON ASSEMBLY
7E, OR EQUIVALENT

ACES, BL 20.00 RH & LH
I. & LH (WL 3093)
ACES, BL 27.12 RH & LH

1
FRAMES

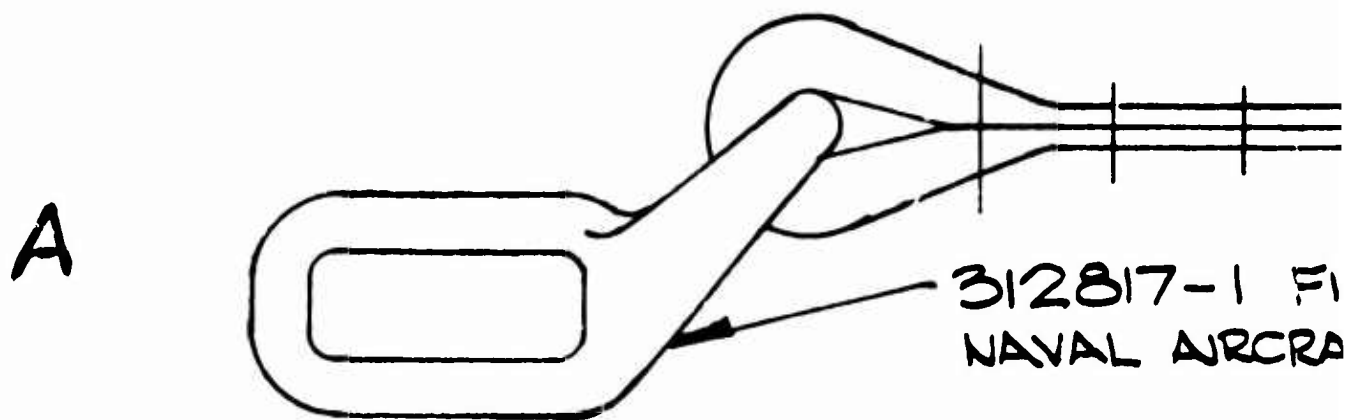
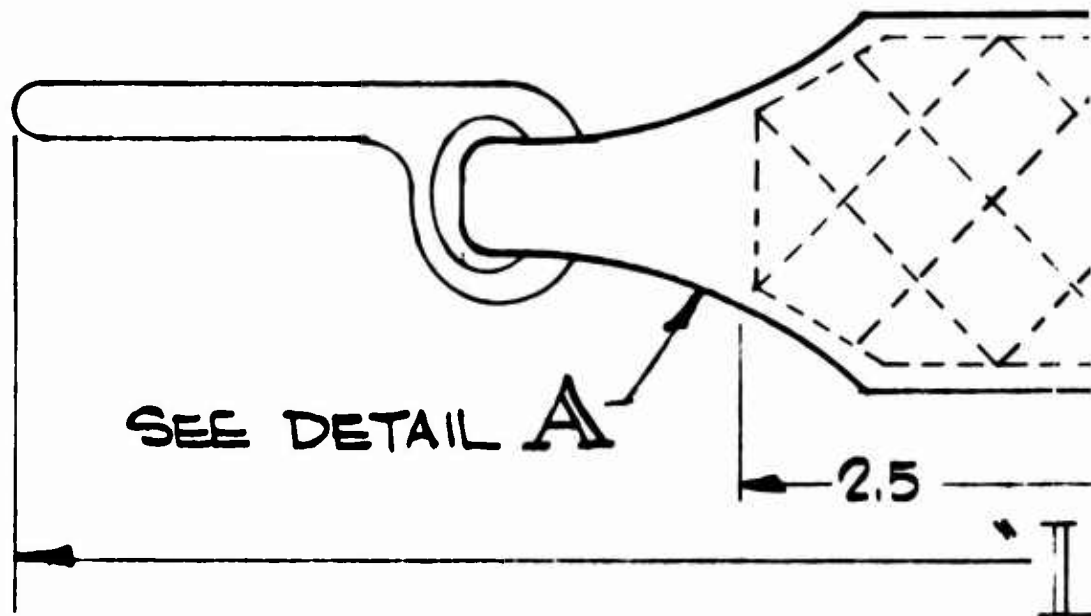


NOTE: M
USED O

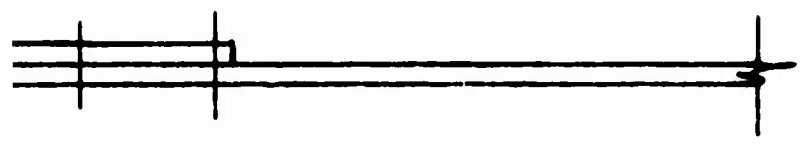
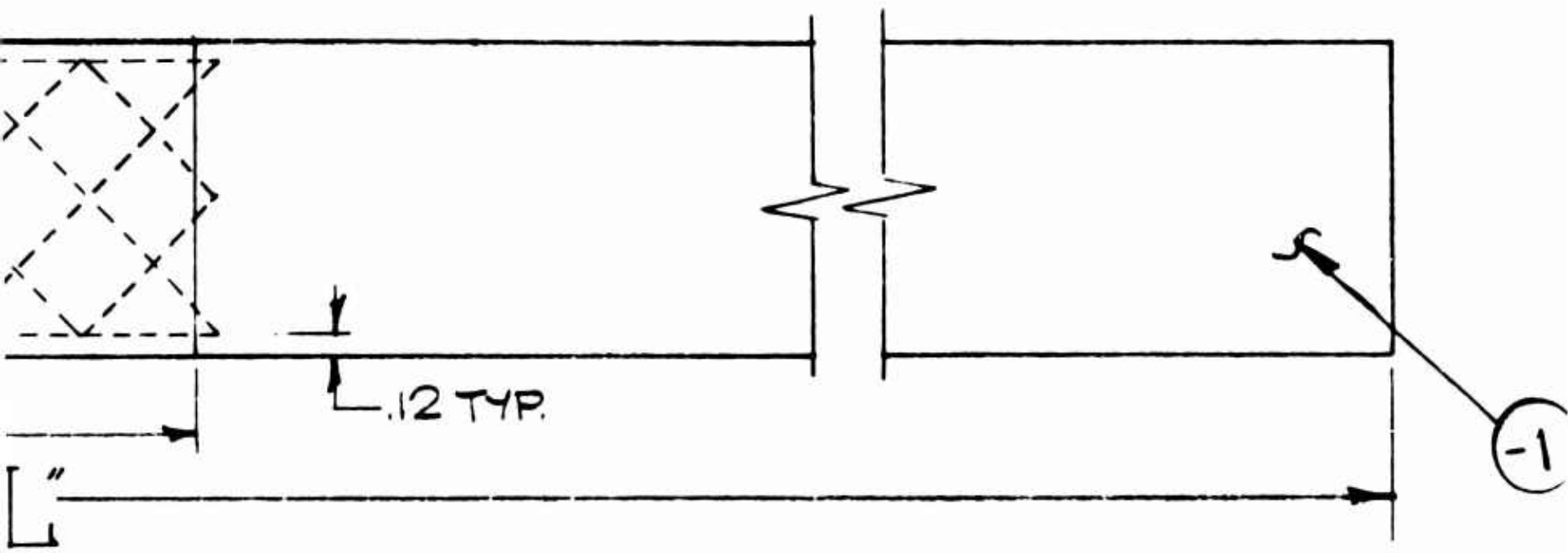


MEDICAL ATTENDANT SEATS ONLY WITH LITTERS

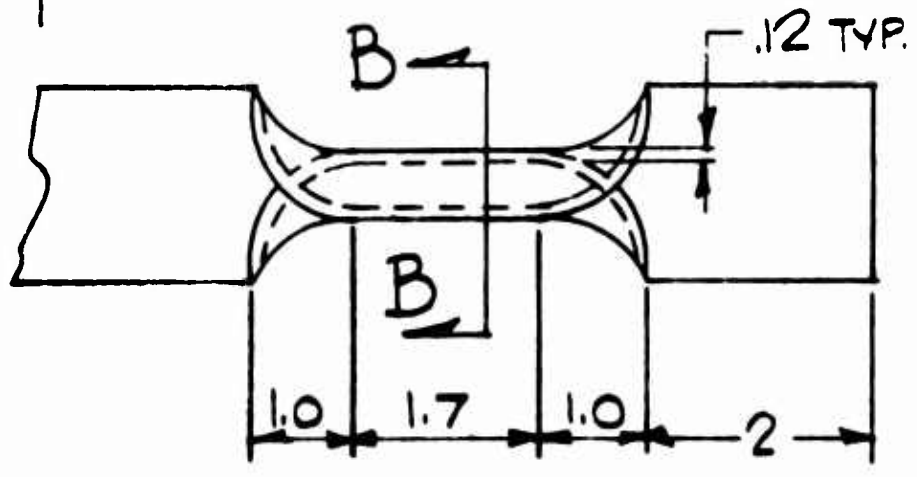
FRAMES



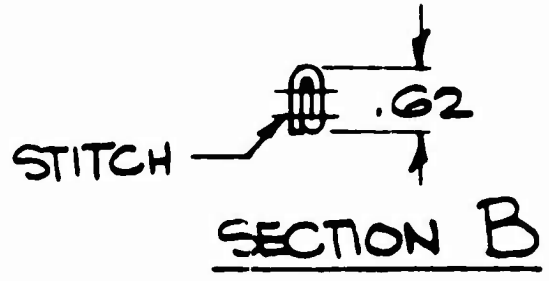
5. DACRON WEBBING TYPE II PER SPEC.
.065 - .085 THICK x 1.72 WIDE MAX.
WT. 2.10 OZ. / YD. MAX.
 4. STITCHING SHALL BE WITH NYLON CORE
NO. 3 SIZE TYPE I OR II, CLASS I, AND
NOT LESS THAN 6 NOR MORE THAN 8
IN ACCORDANCE WITH SPEC. DDD-S-7
 3. ENDS OF STITCHING SHALL BE BACK STIT
 2. SEAR ENDS OF ALL WEBBING TO PREVE
 1. STITCHING INDICATED BY DOTTED LINE
- NOTES!



FITTING
AFT FACTORY

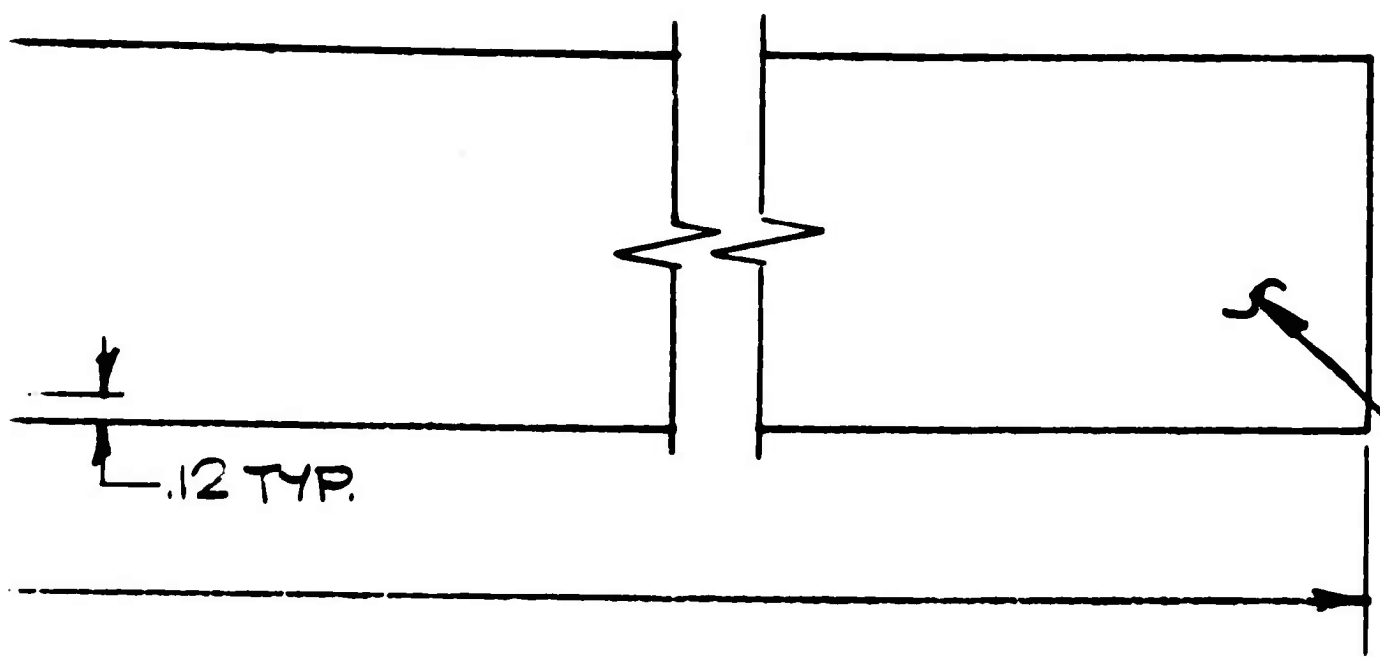


DETAIL A
HALF SIZE

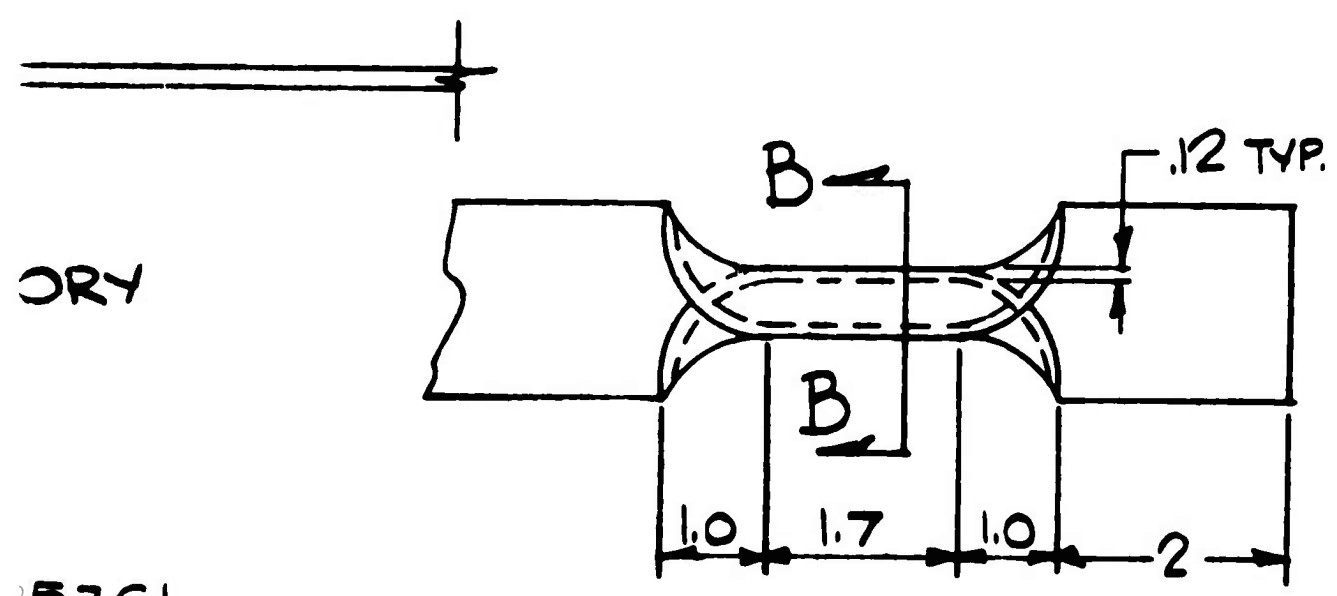


MIL-W-25361

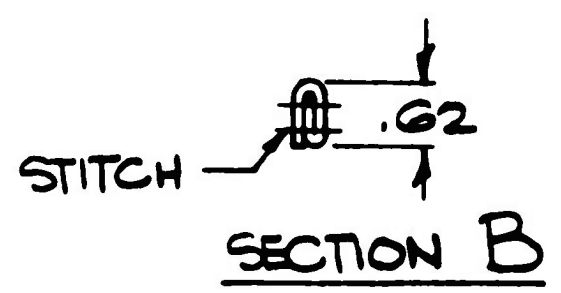
D, MIL-T-7807B
 JD SHALL CONTAIN
 3 STITCHES PER INCH
 751 TYPE 301
 ITCHED 0.5 IN. MIN.
 ENT FRAYING
 IES - - - - -



① WEBBING
SEE NOTE # 5



DETAIL A
HALF SIZE



DRY
25361
1807B
CONTAIN
S PER INCH
301
> IN. MIN.
JG

LENGTH OF STRAP

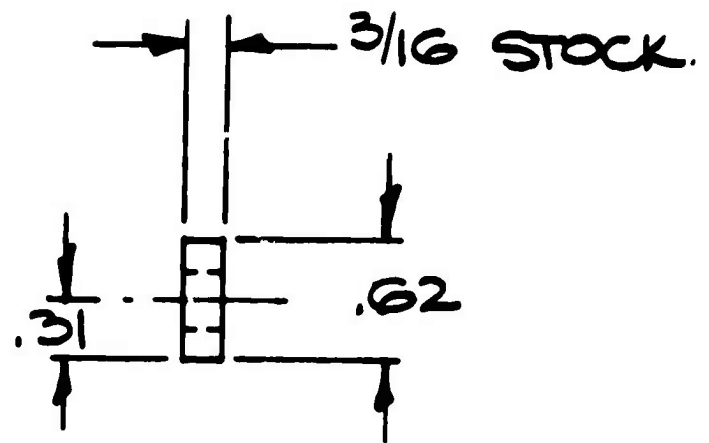
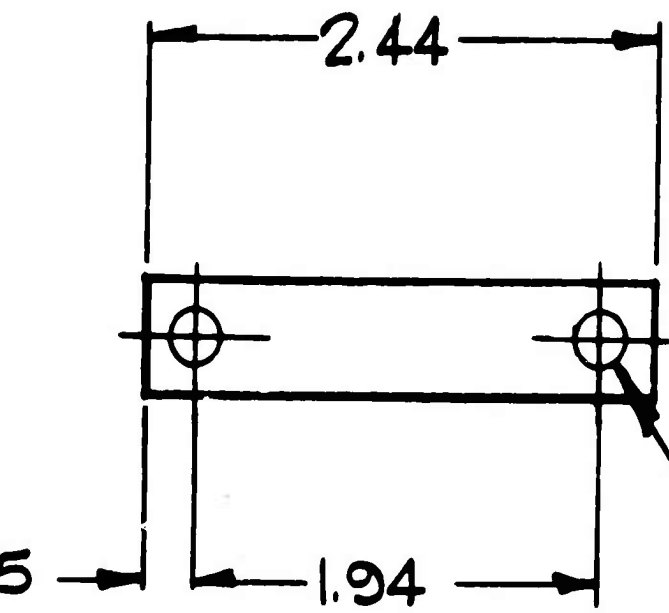
AIRCRAFT	"L" DIM.	NEXT ASSEMBLY.
HC-1	18.1	HC-1-14
HU-1	16.5	HU-1-11
AC-1	20.8	AC-1-10

FR ;

.25

B

J. BRE
NOTE:-



DRILL THRU 3/16 DIA.
2 HOLES

BREAK SHARP EDGES .02 R.