Nomad
SERVICE BULLETIN

Reference No 223

TRANSMITTAL LETTER
FOR
SERVICE BULLETIN NMD-53-11 Rev 1

FUSELAGE - STUBWING - BATTERY SUPPORT STRUCTURE MODIFICATION (Mod N735)

Reason

1. Some operators, with a higher than normal proportion of operations from unprepared strips, have reported a lack of durability of the battery support structure.

2. Revison 1 corrects a reference (page 2), and instructs the operator to re-identify modified parts (page 4).

Instructions

3. Remove Service Bulletin NMD-53-11 dated 14 Nov 90 from Service Bulletin binder and insert the attached Service Bulletin NMD-53-11 Rev 1 dated 18 Apr 91 and annotate the index accordingly.

Revision Status

Original	14 Nov 90
Revision 1	18 Apr 91

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FUSELAGE - STUBWING - BATTERY SUPPORT STRUCTURE MODIFICATION (Mod N735)

1. PLANNING INFORMATION

A. Effectivity

(1) Aircraft Affected

All N22 and N24 Series aircraft whose log books do not already record compliance with this Service Bulletin, Mod N735, or Customer Option R451. Float equipped aircraft are excepted.

(2) Spares Affected

PN 4/N-11-601 Undercarriage Main Pod Assy - LH

B. Reason

Some operators, with a higher than normal proportion of operations from unprepared strips, have reported a lack of durability of the battery support structure.

C. Description

The existing battery tray and stays are removed and the attachment fittings severed. An improved battery tray with gusset side members is installed to provide an improved load path. Reinforcing channels are added to Pod Fwd Sta 14.45 to increase local frame stiffness.

D. Compliance

Recommended.

E. Approval

This modification is approved pursuant to Civil Aviation Regulation 35 and complies with type certification requirements.

F. Manpower

7 1/2 manhours, 2 people, plus paint and sealant cure times.

G. Material - Price and Availability

Contact ASTA General Aviation for price and delivery.

H. Tooling - Price and Availability

None required.

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I. **Weight and Balance**

	N22 Series		N24 Series	
	SI	Imperial	SI	Imperial
Weight	+0.2 kg	+0.5 lb	+0.2 kg	+0.5 lb
Arm	3945 mm	155.3 in	4656 mm	183.3 in
Index Unit	0.79 $\frac{\text{kg mm}}{1000}$	0.08 $\frac{\text{lb in}}{1000}$	0.93 $\frac{\text{kg mm}}{1000}$	0.09 $\frac{\text{lb in}}{1000}$

J. **References**

Maintenance Manual Chap 24-30-01 and 32-10-15

Illustrated Parts Catalogue Chap 52-80-01 Fig 1

Mod - Data Sheet N735

Design Change Proposal - NOO-DC-013

K. **Documents Affected**

Illustrated Parts Catalogue Chap 52-80-01 Fig 1.

2. **ACCOMPLISHMENT INSTRUCTIONS**

NOTE

- Install new components using rivets as indicated. Oversize rivets may be used as required. Drill No 30 for 1/8 in rivets, 4.0 mm for 5/32 in rivets, 4.8 mm for 3/16 in rivets.
- Redundant holes may be filled with Araldite AV123B/HV953B or a suitable sealant.

A. Ensure all external electrical power is disconnected.

B. Gain access to battery in LH main landing gear pod.

C. Remove battery (Ref MM Chap 24-30-01). Retain battery retaining clamps.

D. Remove the LH forward main landing gear door (Ref MM Chap 32-10-15). Identify and retain removed hardware.

E. Refer to MM Chap 24-00-00, Figure 2. Unbolt external power relay and battery relay from pod forward bulkhead. Unscrew battery panel from pod forward bulkhead. Carefully tape back so that they will be clear of the battery tray re-work area. Retain mounting hardware.

NOTE

Do not disconnect wiring.

F. Refer to Figure 1. De-rivet and remove existing Battery Tray PN 1/N-11-619 complete, together with Tray Support Channels PN 1H/N-11-645/646 and Tray Support Angles PN 1J/N-11-645/646.

G. Refer to Figures 2 and 4. Bench assemble Tie Rod Support Channel PN 1C/N-11-619 and Tie Rod Top Hats PN 1D/N-11-619 to Battery Tray PN 1A/N-11-1327.

H. Refer to Figure 4. Attach Battery Support Strips PN 1J/N-11-619 and PN 1K/N-11-619 using PLIOBOND 20 adhesive or suitable equivalent.

I. Refer to Figure 1, Section B-B and Figure 5. Trim Tray Support Plate PN 1M/N-11-646 and dress until flush with face of frame at Pod Sta 14.45.

J. Fit Side Supports PN 1C/N11-1327 and PN 1D/N-11-1327 as follows:

(1) Mark the new, lower and upper tie plate slots as indicated in Figures 2, 3 and 4. Drill and manufacture the four new tie plate slots.

CAUTION

EXERCISE CARE TO ENSURE LOWER AND UPPER PIVOT SUPPORTS ARE NOT DAMAGED.

(2) Seal redundant slots with Scotchcal tape or a suitable sealant.

(3) Refer to Figure 1. Drill rivets 2, 3 and 4 and 12 to 19 both L and R.

(4) Refer to Figure 4 and 6. Position RH upper tie plate and clamp to upper pivot support in pod.

(5) Refer to Figures 4 and 5. Position RH lower tie plate and clamp to lower pivot support in pod. Use pivot bolt to ensure correct alignment of tie plate hole.

(6) Refer to Figures 4, 5 and 6. Position RH side support. Insert upper and lower Packers PN 1G/N-11-1327 and PN 1H/N-11-1327 and clamp.

(7) Ensure tie plates, packers and side support are correctly positioned. Back drill rivet holes on side support using a right angled drill. Drill all other rivet holes.

(8) Dis-assemble, deburr and remove swarf.

(9) Rivet upper tie plate to upper pivot support.

(10) Re-assemble side support, packers and upper and lower tie plates and pin in correct position.

(11) Rivet side support to Pod Sta 14.45 and pivot support. Rivet side support, packers and upper and lower tie plates.

(12) Repeat steps 4 to 11 for LH side support. Ensure both side supports are horizontally aligned.

K. Fit Battery Tray Assy PN 1A/N-11-1327 as follows:

(1) Refer to Figure 4. Position battery tray assy and clamp to L and R side supports. Ensure the floor of the tray is at right angles to pod Sta 14.45, is 14.50 in below hinge PN 1B/N-11-620 and the fore and aft battery tray centre line is 5.20 in forward of Pod Sta 14.45.

(2) Drill, dis-assemble, deburr, reassemble, pin in position and rivet battery tray to side supports.

L. Refer to Figures 1 and 4. Remove existing LH and RH Pivot Support Butt straps PN 1Q/N-11-645/646 and replace with Channel PN 1T/N-11-1327.

M. Refer to IPC Chap 52-80-01, Figure 1. Rework the two spacers PN 1A/N-11-713, which fit nearest the tie plate, by filing or machining 0.040 in from this length. Re-identify the modified spacers as PN 1K/N-11-1327.

N. Protective finish forward of Pod Sta 14.45 as follows:

(1) Mask battery tray support strips.

(2) Prime where required using BMS10-11 zinc chromate epoxy primer or suitable equivalent and paint with a chemical resistant finish white.

(3) Fill all gaps using a neutral curing silicone rubber sealant.

O. When protective finish is dry, bolt external power relay, battery relay and screw battery panel to pod forward bulkhead.

P. Refer to MM Chap 32-10-15 and this Service Bulletin Figure 5. Install forward LH main landing gear door and adjust/test.

Q. Refer to MM Chap 24-30-01. Install battery. Replace any battery cable/vent retaining clamps that may have been removed.

3. **MATERIAL INFORMATION**

The following is a complete list of parts required per aircraft.

New Part No	Qty	Description	Old Part No	Instruction/Disposition
Contents of Service Bulletin Kit NMD-53-11-1				
1A/N-11-1327/spare	1	Battery Tray		
1C/N-11-1327/spare	1	Side Support LH		
1D/N-11-1327/spare	1	Side Support RH		
1E/N-11-1327/spare	2	Tie Plate, Upper		
1F/N-11-1327/spare	2	Tie Plate, Lower		
1G/N-11-1327/spare	2	Packer, Lower		
1H/N-11-1327/spare	2	Packer, Upper (sm)		
1T/N-11-1327/spare	2	Channel		
MS20426AD4-5	26	Rivet C'sk Hd		
MS2047OAD4-4	58	Rivet Uni-Hd		
MS2047OAD4-5	14	Rivet Uni-Hd		
MS2047OAD5-5	30	Rivet Uni-Hd		
Parts retained for re-use				
	1	Support Channel	1C/N-11-619	Retain
	2	Top Hat	1D/N-11-619	Retain
Parts modified and re-identified by operator				
1K/N-11-1327	2	Spacer	1A/N-11-713	Rework
Parts removed				
	1	Side Stay	1H/N-11-645	Scrap
	1	Side Stay	1H/N-11-646	Scrap
	1	Plate, Tray	1M/N-11-645	Scrap
	1	Plate	1Q/N-11-645	Scrap
	1	Plate	1Q/N-11-646	Scrap

4. **SPECIAL TOOLS AND EQUIPMENT**

None required.

5. **RECORDING ACTION**

Record compliance with Service Bulletin NMD-53-11 in airframe log book.

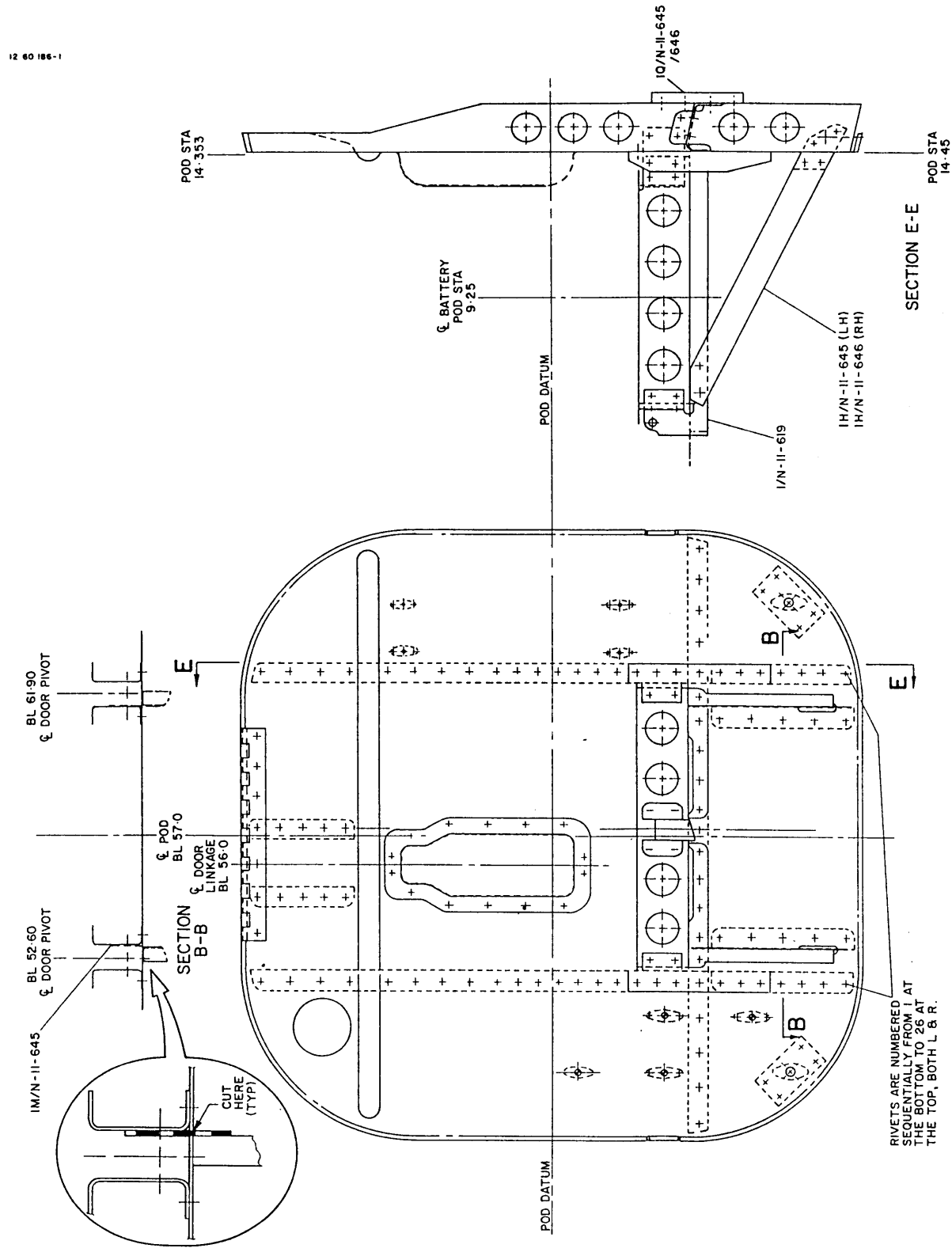

Figure 1 Existing Battery Tray Installation

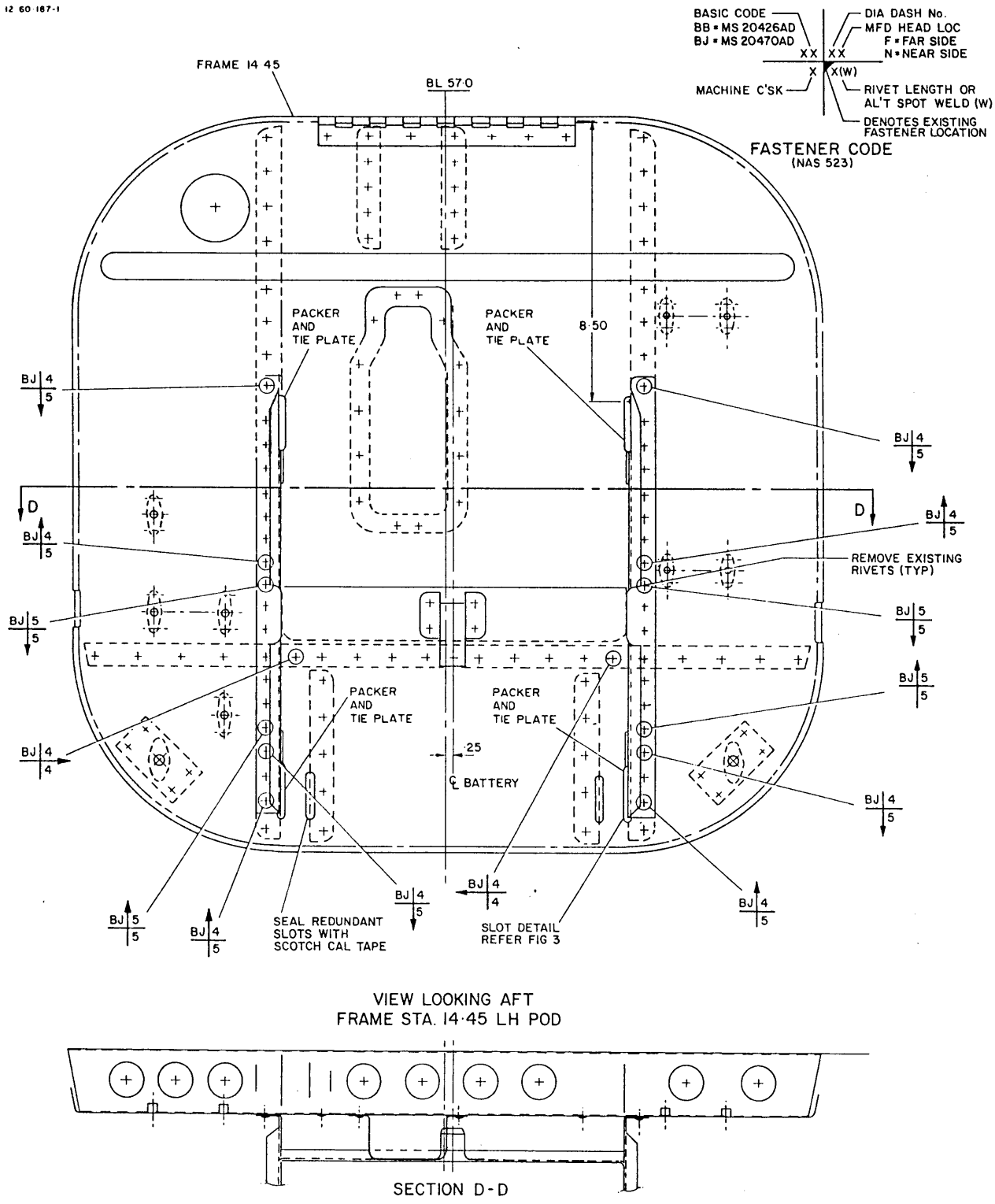

Figure 2 New Side Support Installation Detail

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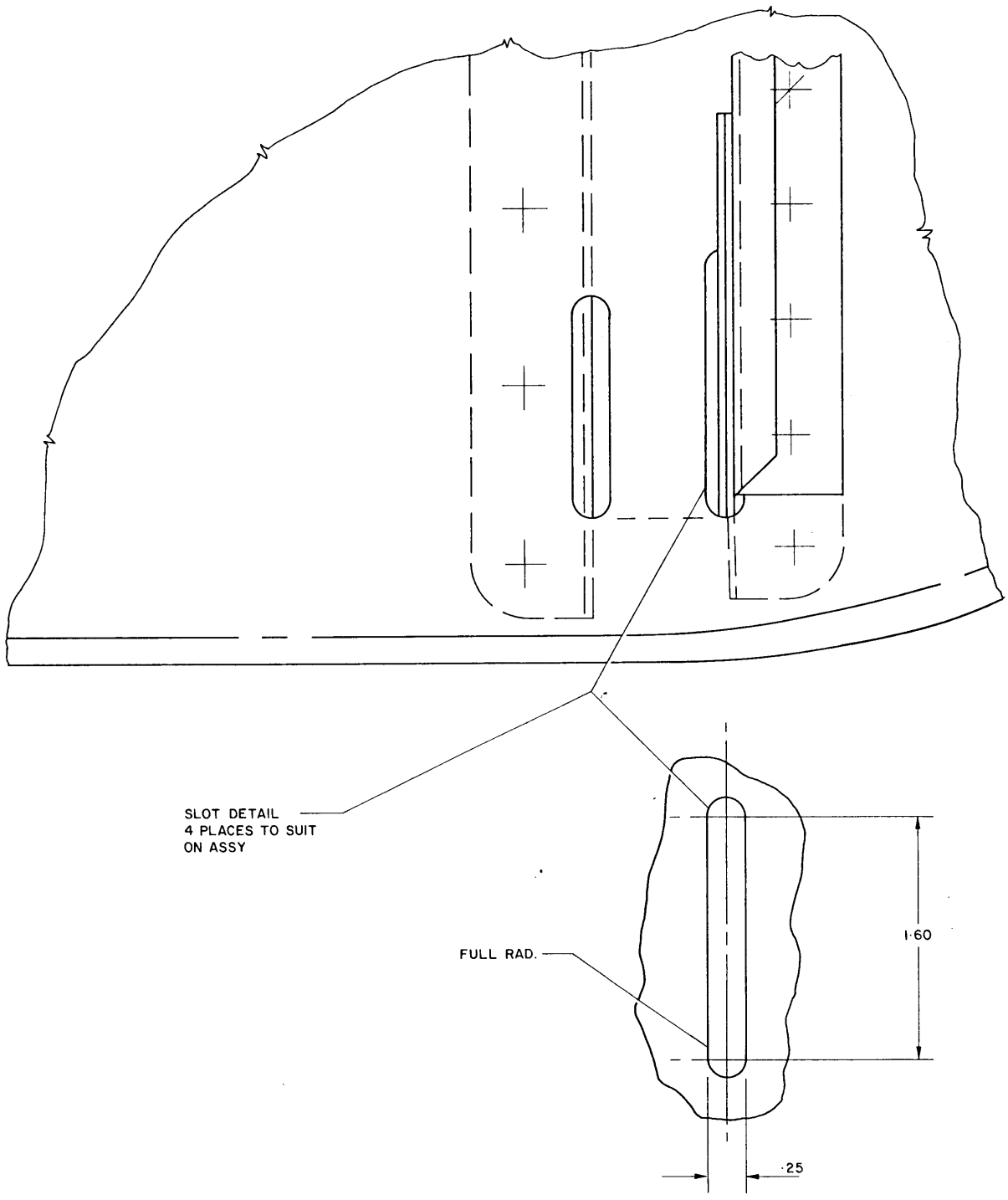

Figure 3 Slot Detail

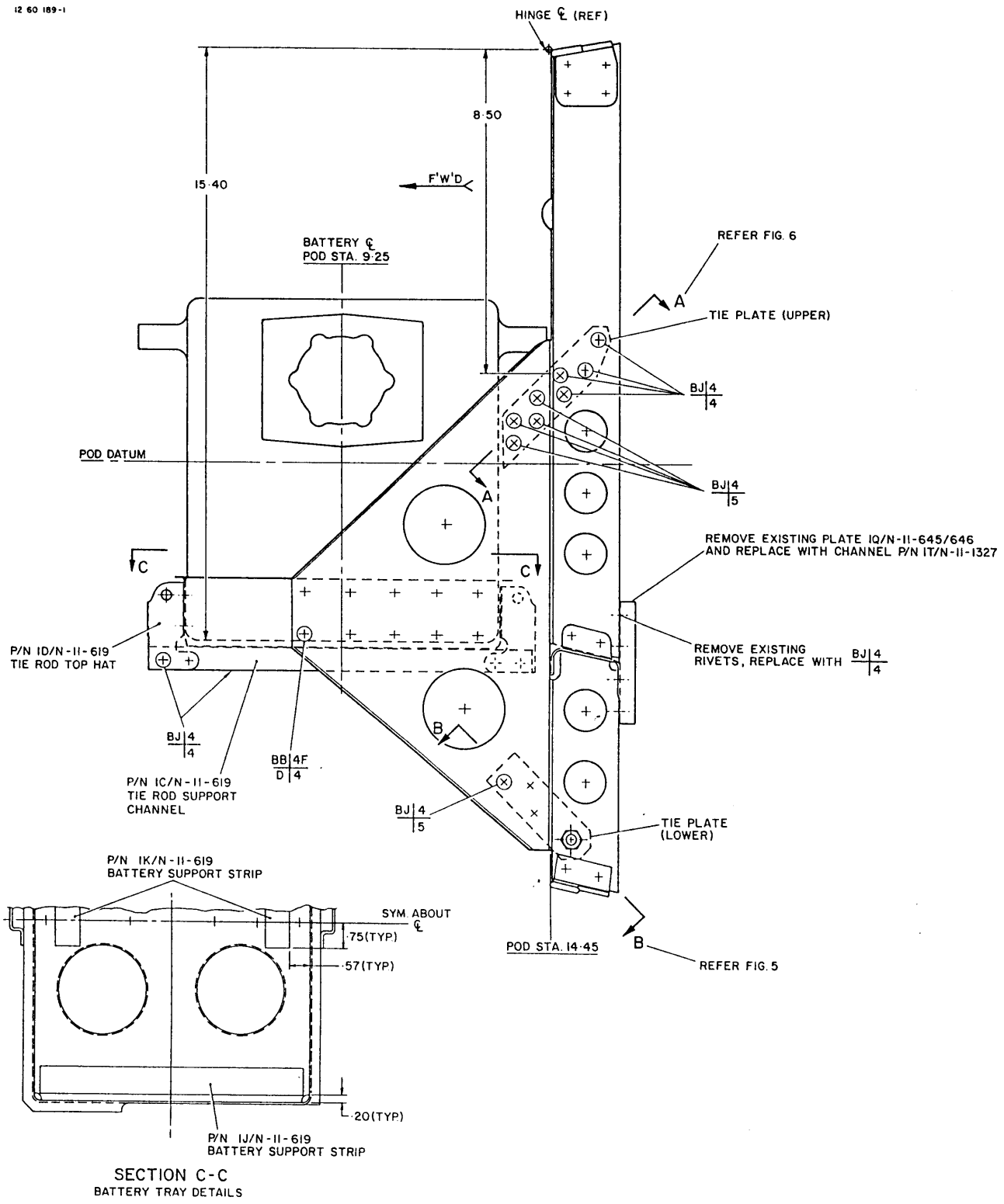

Figure 4 New Battery Tray Installation

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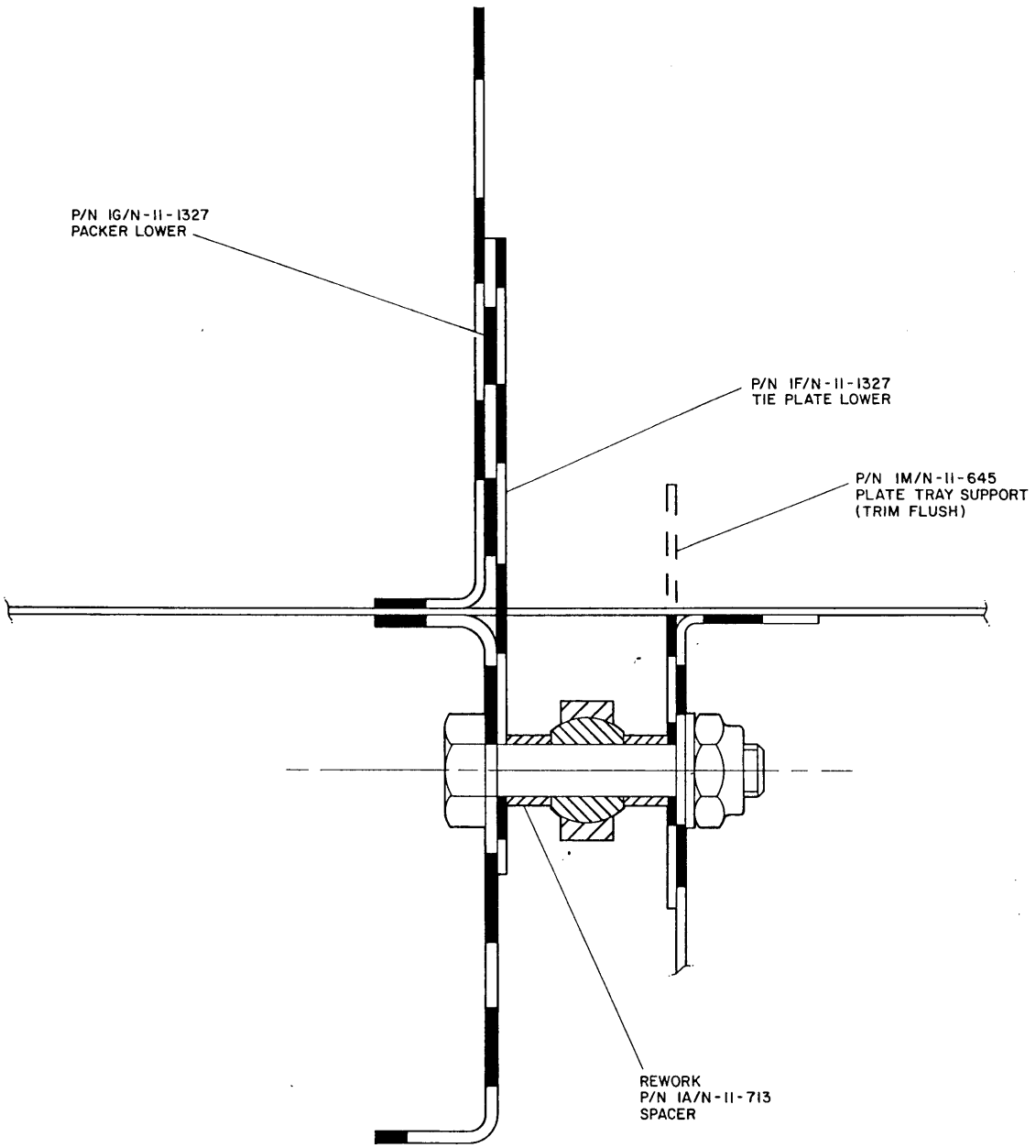

Figure 5 Main Landing Gear Door Hinge

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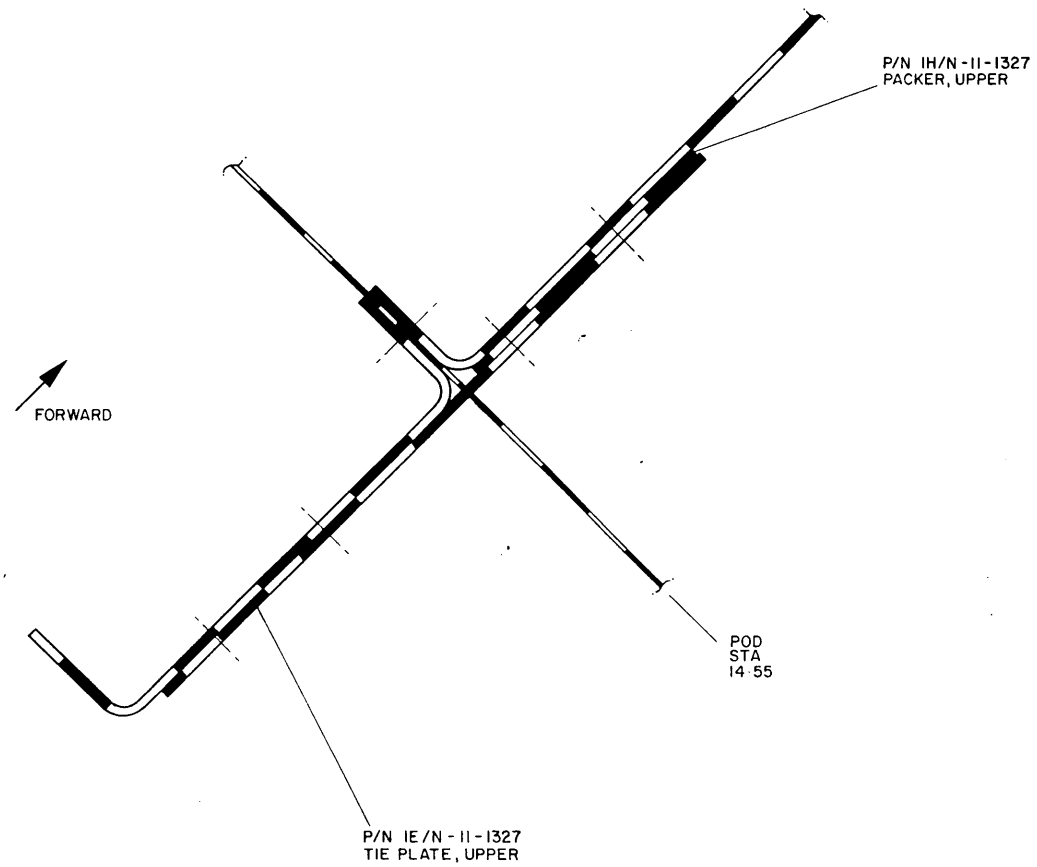

Figure 6 Tie Plate Upper