



Nomad SERVICE BULLETIN

Reference No. 217

TRANSMITTAL SHEET FOR NOMAD SERVICE BULLETIN

SERVICE BULLETIN NO: NMD-52-8 DATED: 10 September 1990

TITLE: Doors - Improvement to Airstair Door (Mod. N533)

REVISION NO: DATE:

ACTION: Insert Service Bulletin NMD-52-8 into Service Bulletin publication and annotate index accordingly.

REASON: To improve the durability of the airstair door.

REMARKS:

10 September 1990

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DOORS - IMPROVEMENT TO AIRSTAIR DOOR (MODIFICATION N533)

1. PLANNING INFORMATION

A. Effectivity

(1) Aircraft Affected

All Nomad N22 Series and N24 Series aircraft that have Customer Option G211 incorporated but whose log books do not record the embodiment of Mod N533 or compliance with Service Bulletin NMD-52-8.

(2) Spares Affected

Kits for Customer Option G211.

B. Reason

To improve the durability of the airstair door.

C. Description

The fixed hand rail is replaced by cable assemblies on either side of the airstair. Retention of the top door in the open position is improved by re-locating and lengthening the retaining pin.

D. Compliance

Recommended.

E. Approval

The modification detailed herein has been approved pursuant to CAR 35 and conforms with type certification requirements.

F. Manpower

3 1/4 manhours.

G. Material - Price and Availability

Material to be obtained from ASTA General Aviation. Price and availability on request.

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H. Tooling - Price and Availability

Nil required.

J. Weight and Balance

The following changes occur:

	<u>N22 Series</u>	<u>N24 Series</u>
Weight	+ .48 kg (+1.07 lb)	+ .48 kg (+1.07 lb)
Moment Change	+ 3079 kg mm (268 lb in)	+ 3433 kg mm (298 lb in)
Index Units (<u>Moment</u>) (1000)	+ 3.08 (.27)	+ 3.43 (.30)

K. References

MM - Maintenance Manual Chapters 25-20-00 and 27-50-00
Customer Option G211

L. Publications Affected

Customer Option G211.

2. ACCOMPLISHMENT INSTRUCTIONS

CAUTION: ENSURE THAT THE FLAPS ARE FULLY RETRACTED.

- A. Open the airstair door and engage the upper door retaining pin into the bung on the cabin forward passenger door.
- B. Open the airstair and support it at the open position.
- C. Remove the split pin, castellated nut, washer and clevis bolt securing the handrail to the handrail support bracket, refer G211 IPC Figure 1, Sheet 4.
- D. Remove the bolt from the lower end of the handrail then remove the handrail.
- E. Remove the screw and washer securing the hinge pin then remove the hinge pin.
- F. Remove the airstair from the aircraft.
- G. Remove the overhead panel assembly, refer MM 25-20-00.
- H. Drill out the rivets securing the handrail support bracket to the door structure.



A S T A

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- J. Position cover plate 1A/N-11-1365 and drill to fit the existing holes. Deburr the holes and rivet the cover plate to the door structure using two MS20600AD5W1 rivets and one MS20600AD4W1 rivet, refer Figure 2.
- K. Position the cover plate 1B/N-11-1365 and drill to match the existing holes in the door surround structure. Deburr the holes and rivet into position with two MS20600AD5W1 rivets. Hand dress the edge between the cover plates to ensure a smooth edge and contour. Use filler if necessary.
- L. Install cable supports.
- (1) Drill out rivets to suit channels 1/N-11-1366. Drill pin holes in the channels to match the rivet holes and pin the channels in position as shown at Figure 2.
 - (2) Using a 3/32 in. dia drill, drill pin holes as required and pin into position diaphragm 1/N-11-1363, diaphragm 1/N-11-1364, small angle 1B/N-11-1359(2 off), top support packer 1F/N-11-1359 and small support plate 1C/N-11-1359 to form the forward cable support assembly, refer Figure 2.
 - (3) Using a 3/32 in. dia drill, drill pin holes as required and pin into position diaphragm 1/N-11-1363, diaphragm 1/N-11-1364, large angle 1G/N-11-1359(2 off), top support packer 1F/N-11-1359 and large support plate 1D/N-11-1359 to form the aft cable support assembly, refer Figure 2.
- NOTE:** Diaphragm 1/N-11-1364 may need to be cut to clear the tail of the gutter rivet as shown in Figure 2.
- (4) Using a 4.1 mm dia drill, drill holes through the diaphragm to match the support plates, refer Figure 2.
 - (5) Using a No. 30 drill, open out all rivet holes. Ensure that the rivet holes for the diaphragms do not pass through the gutter, refer Figure 2.
 - (6) Disassemble the forward cable support assembly. Deburr all holes, reassemble and rivet into position using rivets as detailed in Figure 2.
 - (7) Disassemble the aft cable support assembly. Deburr all holes, reassemble and rivet into position using rivets as detailed in Figure 2.
- M. Rework airstair.
- (1) Position joggled plate 1A/N-11-1359 and bottom support plate 1E/N-11-1359 on the forward side of the airstair. With the plates as templates, and using a No. 30 drill, drill rivet holes, in the airstair. Deburr all the holes and rivet the plates to the airstair as shown in Figure 1.



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- (2) Fit the spigot assembly 1/N-11-1360 to the airstair structure using a AN5-27A bolt and two washers as shown in Figure 1, Section B-B.
- (3) Remove the existing facing on the airstair treads, clean the face of the treads and bond the non-slip facings 1D/N-11-1362 to the treads with Araldite AV123B/HV953B or similar.
- (4) Fit cable assembly 1/N-45-146 to the bottom support plate and fit cable assembly 1/N-45-147 to the spigot assembly as shown in Figure 1, Section B-B. Finger tighten nuts, check that fork ends rotate freely then drill bolts and install split pins.

N. Install airstair.

- (1) Support the airstair at the open position and align the hinges on the airstair with the hinges on the cabin floor.
- (2) Lubricate the hinge pin with XG275 grease. Insert the pin through the hinges and secure in position with a screw and washer.
- (3) Secure the cable assemblies to the support plates with quick release pins MS17984-303. Check the adjustment of the cables to ensure that the airstair is being held equally by both cables.
- (4) Check the opening and closing of the airstair and the airstair door.

P. Remove and discard retaining pin 1/N-11-865 from the airstair door. Install screw MS35207-261 in hole.

Q. Drill out the four rivets securing the bung, plate and dish to the forward passenger door. Retain the bung, plate and dish for refitting. Using the plate as a template, manufacture a blanking plate from aluminium alloy to cover the hole in the door. Alodine and prime the blanking plate and rivet into position with four AGS2050-419BS rivets.

R. Remove the trim from the airstair door. Mark and drill the hole for the new retaining pin then position as shown in Figure 1, Section D-D. Deburr the hole and install the retaining pin 1/N-11-1342 with washer AN960-10L and locknut MS21044N3.

S. Open the airstair door and, using the retaining pin as a guide, mark the position for the dish 1/N-11-584 and bung 1/N-11-585, refer Figure 1, Detail E. Cut a 1.0 in hole in the top skin of the forward passenger door to suit the dish. Position the dish and drill four rivet holes. Deburr the holes and rivet the dish and bung into position using four AGS2050-419BS rivets.

T. Alodine and epoxy prime any bare metal. Touch up primed areas to match aircraft colour scheme.



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- U. Re-identify airstair 1A/N-11-1362 and airstair door 1B/N-11-1362.
- V. Refit trim to the airstair door.
- W. Refit the overhead panel assembly, refer MM 25-20-00.
- X. Check the operation of the airstair door latch mechanism. Lubricate the latch pins with XG275 grease or equivalent.
- Y. Check the operation of the cabin door flap prohibition microswitch, refer to MM Chap 27-50-00 Maintenance Practices.

3. MATERIAL INFORMATION

A. Parts required per Aircraft

<u>New P/N</u>	<u>Qty</u>	<u>Title</u>	<u>Old P/N</u>	<u>Instructions/ Disposition</u>
1A/N-11-1359	1	Plate, Joggled		
1B/N-11-1359	2	Angle, Small		
1C/N-11-1359	1	Support Plate, Small		
1D/N-11-1359	1	Support Plate, Large		
1E/N-11-1359	1	Support Plate, Bottom		
1F/N-11-1359	2	Packer, Top Support		
1G/N-11-1359	1	Angle, Large		
1/N-11-1360	1	Spigot Assembly		
1/N-84-145	1	Cable Assembly		
1/N-84-146	1	Cable Assembly		
MS17984-303	2	Pin, Quick Release		
MS17984-C303	2	Pin, Quick Release (Alt)		
MS24665-155	2	Pin, Split		
AN310-3	1	Nut, Castellated		
AN310-4	1	Nut, Castellated		
AN4-6	1	Bolt		
AN960-10	1	Washer		
MS20470AD5-7	6	Rivet		
AN5-27A	1	Bolt		
1D/N-11-1362	2	Non-slip Facing 6 inches wide x 12 inches long (3M Walkway)		
MS20600AD4W2	21	Rivet		
MS20600AD4W3	10	Rivet		
AN3-6	1	Bolt		
AN960-516	2	Washer		
AN96010L	2	Washer		
AN960-KD416	1	Washer		
1/N-11-1342	1	Pin, Retaining	1/N-11-865	Scrap
MS21044-N3	1	Nut		
AGS2050-419BS	8	Rivet, 'Pop'		



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<u>New P/N</u>	<u>Qty</u>	<u>Title</u>	<u>Old P/N</u>	<u>Instructions/Disposition</u>
1A/N-11-1362	1	Airstair	1/N-11-879(Pre Mod N383)	Rework
1B/N-11-1362	1	Airstair Door	2/N-11-879(Post Mod N383)	Rework
			1/N-11-856(Pre Mod N383)	Rework
			2/N-11-856(Post Mod N383)	Rework
			3/N-11-856(Post Mod N481)	Rework

<u>New P/N</u>	<u>Qty</u>	<u>Title</u>	<u>Old P/N</u>	<u>Instructions/Disposition</u>
MS20600AD4W1	11	Rivet		
MS20600AD5W1	4	Rivet		
MS20470AD4-4	26	Rivet		
MS20470AD4-5	6	Rivet		
1A/N-11-1365	1	Cover Plate		
1B/N-11-1365	1	Cover Plate		
1/N-11-1363	2	Diaphragm		
1/N-11-1364	2	Diaphragm		
1/N-11-1366	2	Channel		
MS35207-261	1	Screw		

B. Parts Removed.

<u>Part No.</u>	<u>Qty</u>	<u>Title</u>	<u>Instructions/Disposition</u>
1/N-11-927	1	Bracket, Handrail Support	Scrap
1/N-11-883	1	Handrail Assembly (Pre Mod N383)	Scrap
2/N-11-883	1	Handrail Assembly (Post Mod N383)	Scrap

<u>Part No.</u>	<u>Qty</u>	<u>Title</u>	<u>Instructions/Disposition</u>
MS24665-142	1	Pin, Split	Scrap
AN320-4	1	Nut, Castellated	Scrap
AN960PD416	1	Washer	Scrap
AN24-13	1	Clevis Bolt	Scrap
AN5-27A	1	Bolt	Scrap
1K/N-11-869	2	Matting, Ribbed Rubber (Post N383)	Scrap
1/N-11-865	1	Pin, Retaining (Pre Mod N383)	Scrap
1/N-11-1251	1	Catch, Retaining (Post Mod (N383)	Scrap

4. SPECIAL TOOLS AND EQUIPMENT

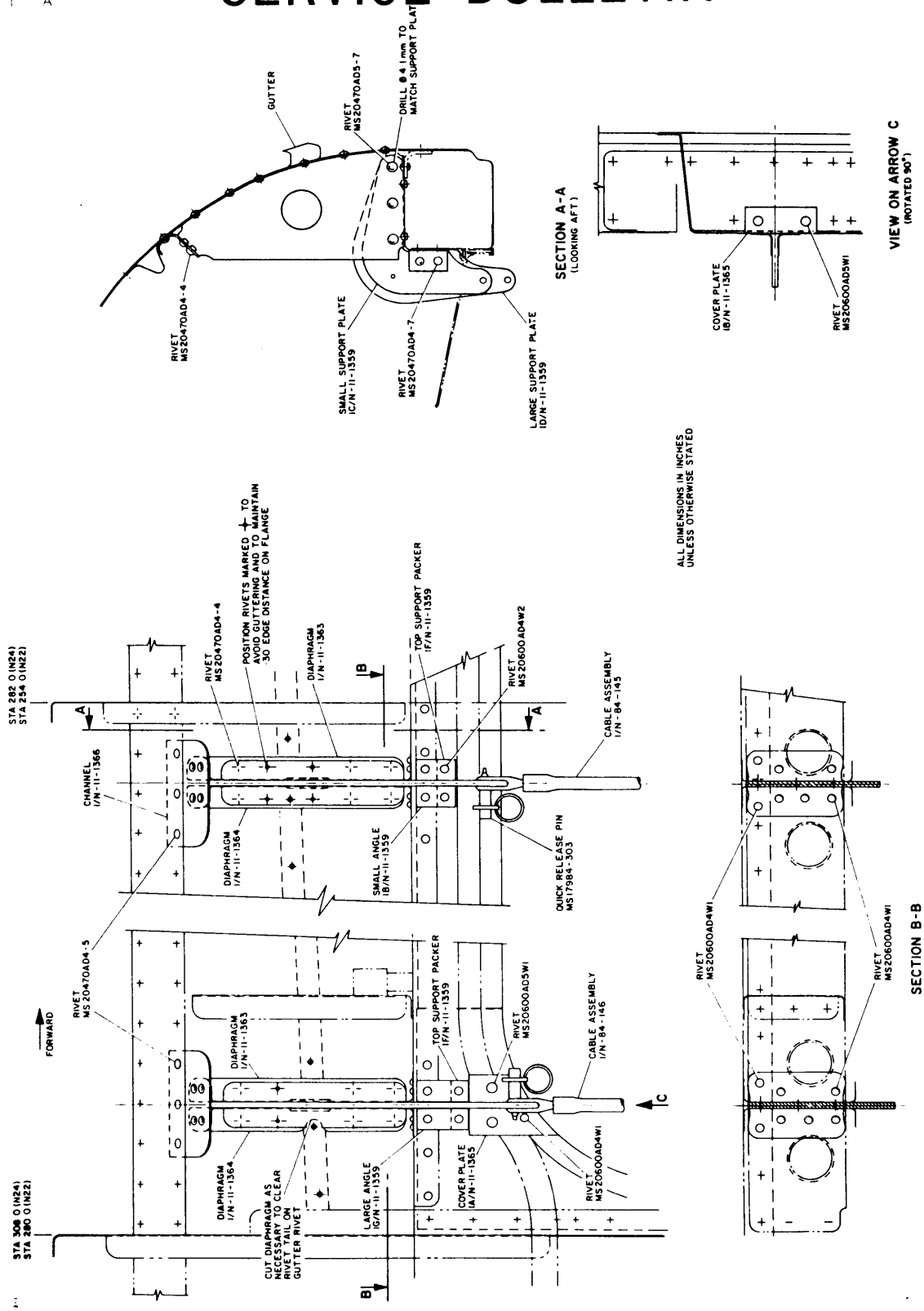
None required.

5. RECORDING ACTION

Record compliance with Service Bulletin NMD-52-8 in Airframe Log Book.



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ALL DIMENSIONS IN INCHES UNLESS OTHERWISE STATED

Installation of Cable Supports
Figure 2