Nomad
SERVICE BULLETIN

WINGS – TRAILING EDGE ACCESS DOORS SPOT WELDS – INSPECTION AND REPAIR

1. PLANNING INFORMATION

A. Effectivity

(1) All Nomad N22 series and N24 series aircraft.

(2) Spares Affected

None.

B. Reason

A routine repair of a Nomad wing found that several spot welds on the trailing edge access doors were cracked and some were detached.

This Service Bulletin requires an inspection for cracking and the introduction of rivets to provide additional security for spot welded components.

C. Description

(1) Inspection

An inspection is to be carried out on all wing trailing edge doors from WSTA 0 to WSTA 287.45 for cracking around and adjacent to spot welds to determine the security of riblets, stiffeners and hinges.

(2) Repair

Repairs are to be made to all wing trailing edge doors from WSTA 0 to WSTA 287.45. Spot welded components are secured by including additional rivets.

D. Compliance

The compliance requirements of this Service Bulletin are MANDATORY.

(1) All trailing edge doors are to be inspected at the next 300 hour inspection or within 6 months, whichever occurs first, following receipt of Service Bulletin NMD–57–14.

(2) If any defects are found, repair in accordance with Para 2.B.

(3) Subsequent inspections are to be carried out at 300 hour intervals, or 6 months, whichever occurs first.

(4) Subsequent inspections are not required once all the doors have been fully repaired in accordance with Para 2.B.

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E. **Approval**

The requirement detailed herein has been approved by a person authorised under Civil Aviation Regulation 35 and conforms to the type certification requirements.

F. **Manpower**

(1) Inspection — Approximately 3.0 manhours.

(2) Repair — Approximately 0.25 manhour for each spot weld.

G. **Material – Price and Availability**

Obtain parts from own stock or local sources.

H. **Tooling**

None.

I. **Weight and Balance Change**

None.

J. **References**

Maintenance Manual	Chap 27–50–00
Illustrated Parts Catalogue	Chap 57–00–00

K. **Publications Affected**

Maintenance Manual

Illustrated Parts Catalogue

2. **ACCOMPLISHMENT INSTRUCTIONS**

WARNING

DO NOT OPERATE THE FLIGHT CONTROLS WITH COMPONENTS OR CONTROL CABLES DISCONNECTED OR WHEN PERSONNEL ARE WORKING IN THE AREA CONCERNED. SERIOUS INJURY TO PERSONNEL OR DAMAGE TO FLIGHT CONTROL COMPONENTS AND STRUCTURE COULD OCCUR.

CAUTION

- ENSURE THERE ARE NO OBSTRUCTIONS IN THE PATH OF THE FLAPS.
- WITH THE FLAPS EXTENDED BEYOND 20 DEGREES AND ELECTRICAL POWER CONNECTED AVOID INADVERTENT OPERATION OF THE ENGINE POWER LEVERS.
- WITH THE FLAPS EXTENDED TAKE CARE TO AVOID FOULING THE FLAPS WHEN OPENING THE MAIN CABIN DOOR. ONLY THE REAR HALF OF THE DOOR CAN BE USED AND PARTICULAR CARE MUST BE TAKEN DURING WINDY OR GUSTY CONDITIONS.

A. **Inspection**

(1) Extend the flaps (Ref MM 27–50–00).

(2) Disconnect electrical power.

(3) Open the left hand and right hand wing trailing edge door assemblies (Ref IPC 57–00–00).

WARNING

AVOID PLACING ANY WEIGHT ON THE OPEN DOORS.

(4) Check that the components shown in Table 1 are secured to the wing trailing edge door skin and that the spot welds have no defects as shown in Figures 2, 3 and 4. Note that a split spot weld (Ref Fig 2) shows no visible sign and can only be identified by pulling on the attached component.

Table 1

Item No (Refer Fig 1)	RH & LH Wing Station	RH & LH Trailing Edge Door Assembly PN	RH & LH Trailing Edge Door Hinges PN	RH & LH Trailing Edge Door Riblets & Stiffener PN	RH & LH Trailing Edge Door Stiffeners (at door edge) PN
1	0 - 28.55	1/N-20-461/462	1D/N-20-461/462	1/N-20-477	1B/N-20-461/462
2	28.55 - 52.45	1/N-20-463/464	1D/N-20-463/464	1/N-20-477	1B/N-20-463/464
3	52.45 - 61.70	1/N-20-465/466	1C/N-20-465/466		1B/N-20-465/466
4	61.70 - 115.40	1/N-20-467/468	1D/N-20-467/468	1/N-20-477	1B/N-20-467/468
5	115.40 - 172.75	1/N-20-469/470	1F/N-20-469/470	1/N-20-477	1B/N-20-469/470
					1C/N-20-469/470
6	172.75 - 192.95	1/N-20-471/472	1D/N-20-471/472		1B/N-20-471/472
7	192.95 - 259.60	1/N-20-473/474	1G/N-20-473/474	1/N-20-478	1B/N-20-473/474
				1E/N-20-473	1C/N-20-473/474
					1D/N-20-473/474
8	259.60 - 287.45	1/N-20-475/476	1D/N-20-475/476	1/N-20-478	1B/N-20-475/476

B. **Repair**

(1) Trailing edge door hinges (Ref Table 1 and Figures 1 and 5).

(a) Stop drill any cracks (Ref Figure 4) with a 1/16 - 3/32-in drill. Drill through the skin only. Alodine and prime the hole .

(b) Alodine and prime any detached spot welds (Ref Figure 3). Split welds (Ref Figure 2) can be left as is.

(c) Install rivets at equal spacing between spot welds and existing end rivets (if present) (Ref Fig 5).

(d) If spot welds are found in place of end rivets insert an additional rivet 1/4-in from them (Ref Fig 5).

(e) Install rivets as follows:

1 Drill out 0.125 in diameter, deburr the rivet holes, and countersink holes to 0.18-in diameter x 100° on the inside face of the wing trailing edge door hinge and deburr (Ref Fig 5).

2 Wet install rivets PN MS20470AD4–3 (rivet head on outside surface) using pigmented jointing compound. Drive rivet tail into the countersink and dress off flush.

(2) Trailing edge door riblets (Ref Table 1 and Figures 1 and 6).

(a) Stop drill any cracks (Ref Figure 4) with a 1/16 - 3/32-in drill. It is acceptable to drill through the skin and riblet. Alodine and prime the hole.

(b) Alodine and prime any detached spot welds (Ref Figure 3). Split welds (Ref Figure 2) can be left as is.

(c) Install rivets at equal spacing between spot welds (Ref Fig 6).

(d) Install rivets as follows:

1 Drill out 0.098-in diameter and deburr.

2 Wet install rivets PN MS20470AD3–3 (rivet head on outside surface) using pigmented jointing compound (Ref Fig 6).

(3) Trailing edge door stiffeners (at door edge) (Ref Table 1 and Figures 7 & 8).

(a) Stop drill any cracks (Ref Figure 4) with a 1/16 - 3/32-in drill. It is acceptable to drill through the skin and stiffener. Alodine and prime the hole.

(b) Alodine and prime any detached spot welds (Ref Figure 3). Split welds (Ref Figure 2) can be left as is.

(c) Install rivets at equal spacing between spot welds. When a stud comes between spot welds, ensure the rivet is at least 0.4-in from the stud centre (Ref Fig 7).

(d) Install a rivet at each end, 0.4-in inward from the outermost studs in items1-4 and 6-8 (Ref Fig 7) and the inboard end of item 5.

(e) Install rivets as follows:

1 Drill out 0.098-in diameter, deburr the rivet holes, and countersink to 0.021-in deep x 100° on the inside face of the stiffener and deburr.

CAUTION

DUE TO THE THINNESS OF THE STIFFENER, A SHALLOW COUNTERSINK IS USED. DO NOT COUNTERSINK INTO THE DOOR SKIN OR A 'KNIFE-EDGE' CONDITION WILL RESULT.

2 Wet install rivets NAS1097AD3–3 (rivet head on inside surface) using pigmented jointing compound (Ref Fig 7 & 8).

(4) Close the left hand and right hand wing trailing edge door assemblies (Ref IPC 57–00–00).

(5) Re-connect electrical power.

(6) Retract the flaps (Ref MM 27–50–00).

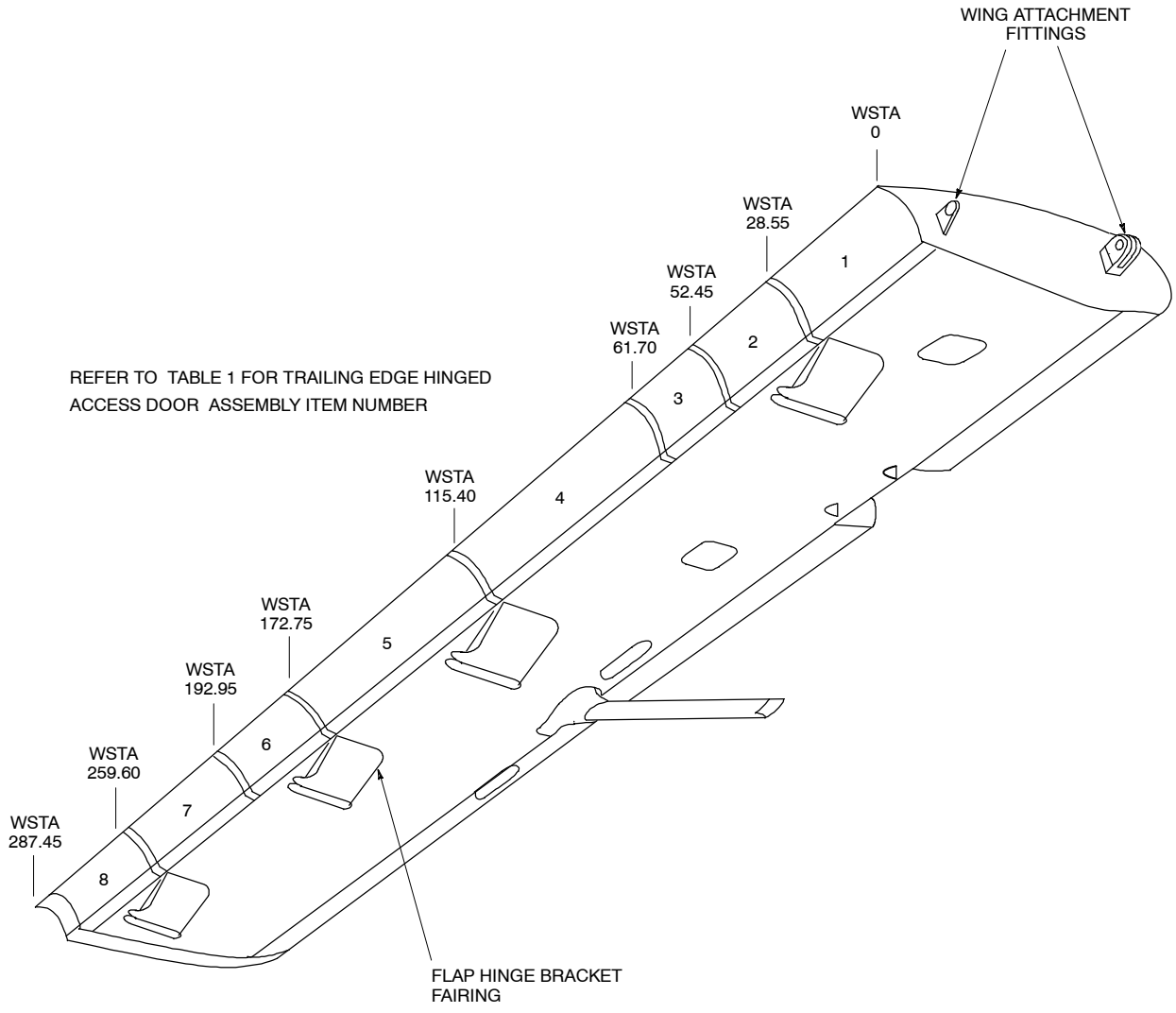
3. SPECIAL TOOLS AND EQUIPMENT

None.

4. RECORDING ACTION

On performing inspection, record "Service Bulletin NMD-57-15 para 2.A." in the Airframe Log Book.

On completing repair of all doors, record "Service Bulletin NMD–57–14 para 2.B." in the Airframe Log Book.



NOTE: PORT WING SHOWN

Figure 1 Wing Trailing Edge Doors

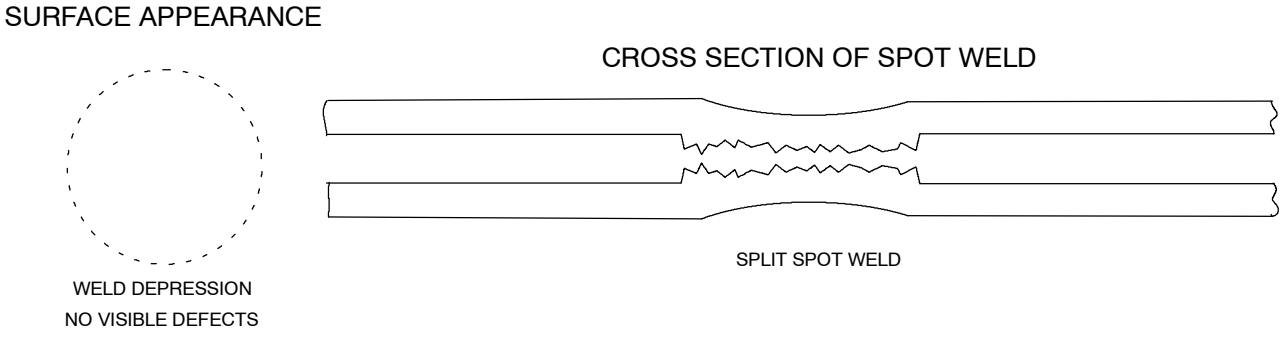


Figure 2 Split Spot Weld

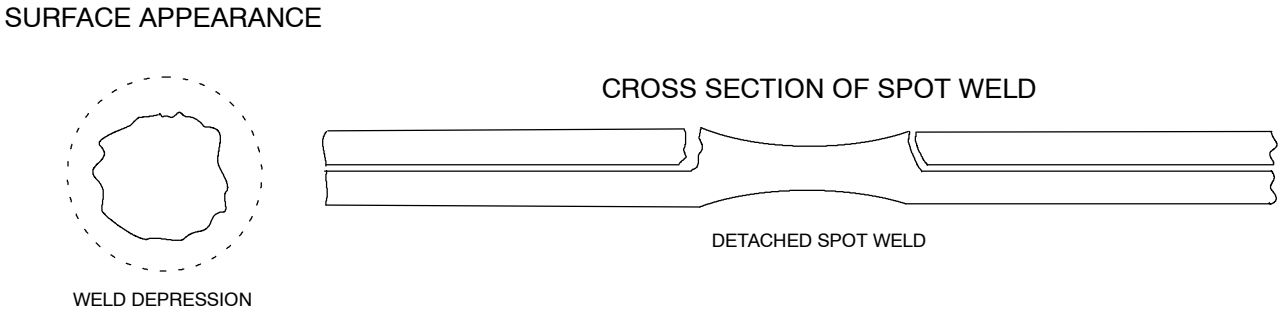


Figure 3 Detached Spot Weld

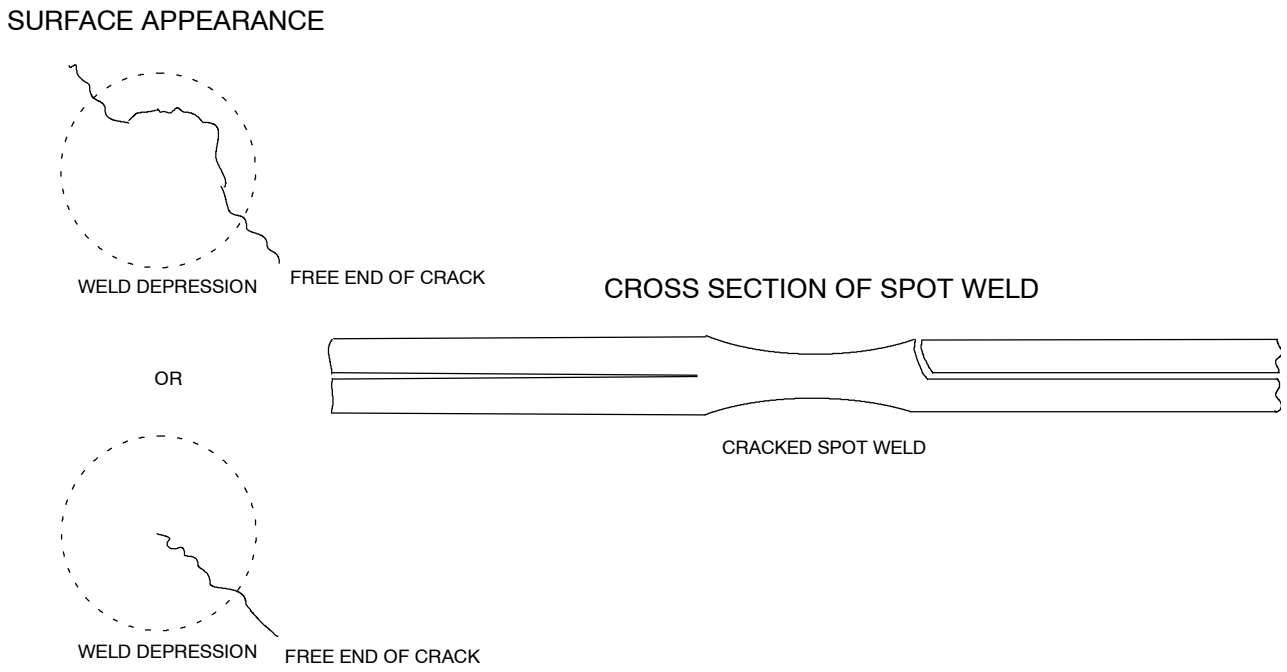


Figure 4 Cracked Spot Weld

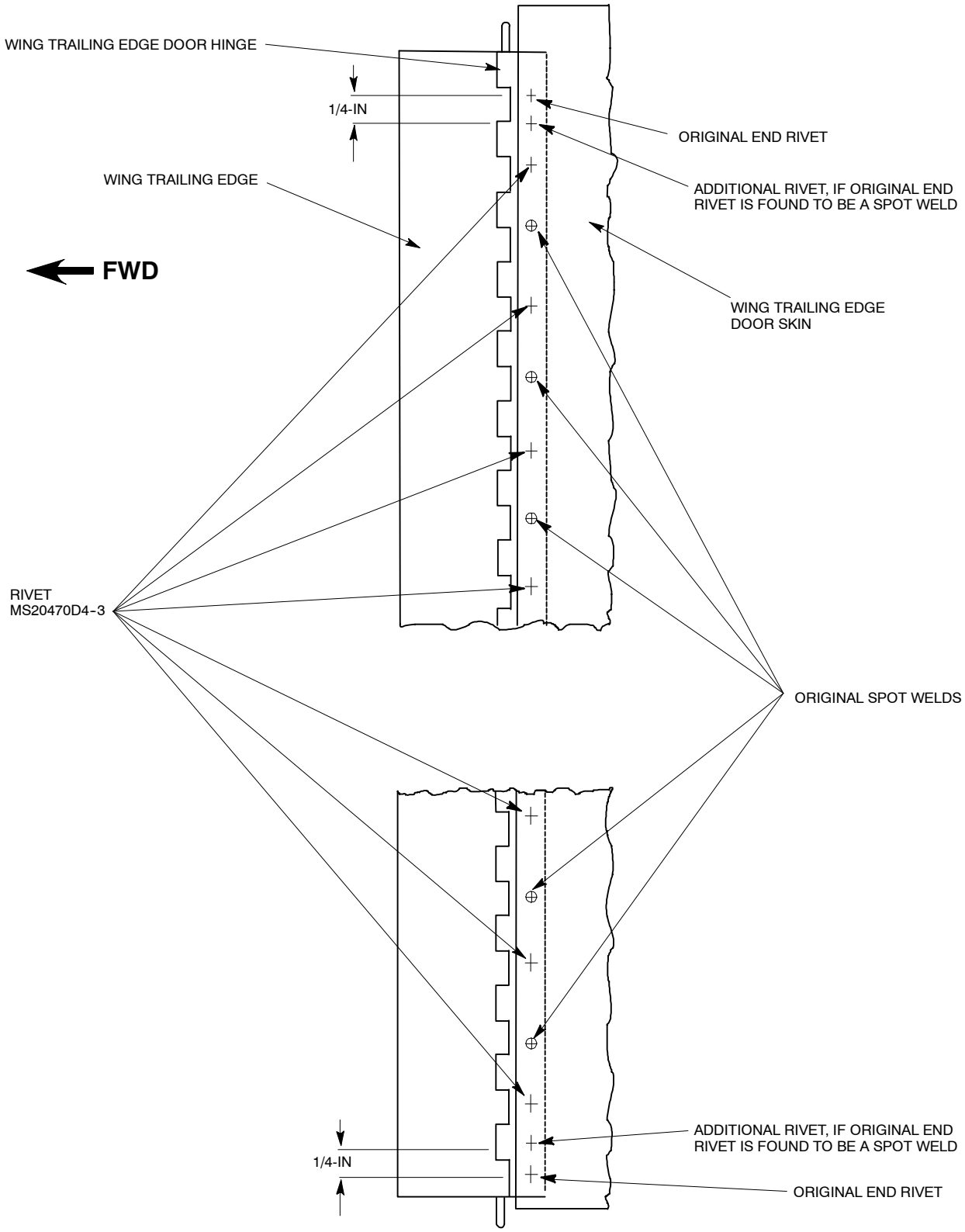


Figure 5 Wing Trailing Edge Door Hinge

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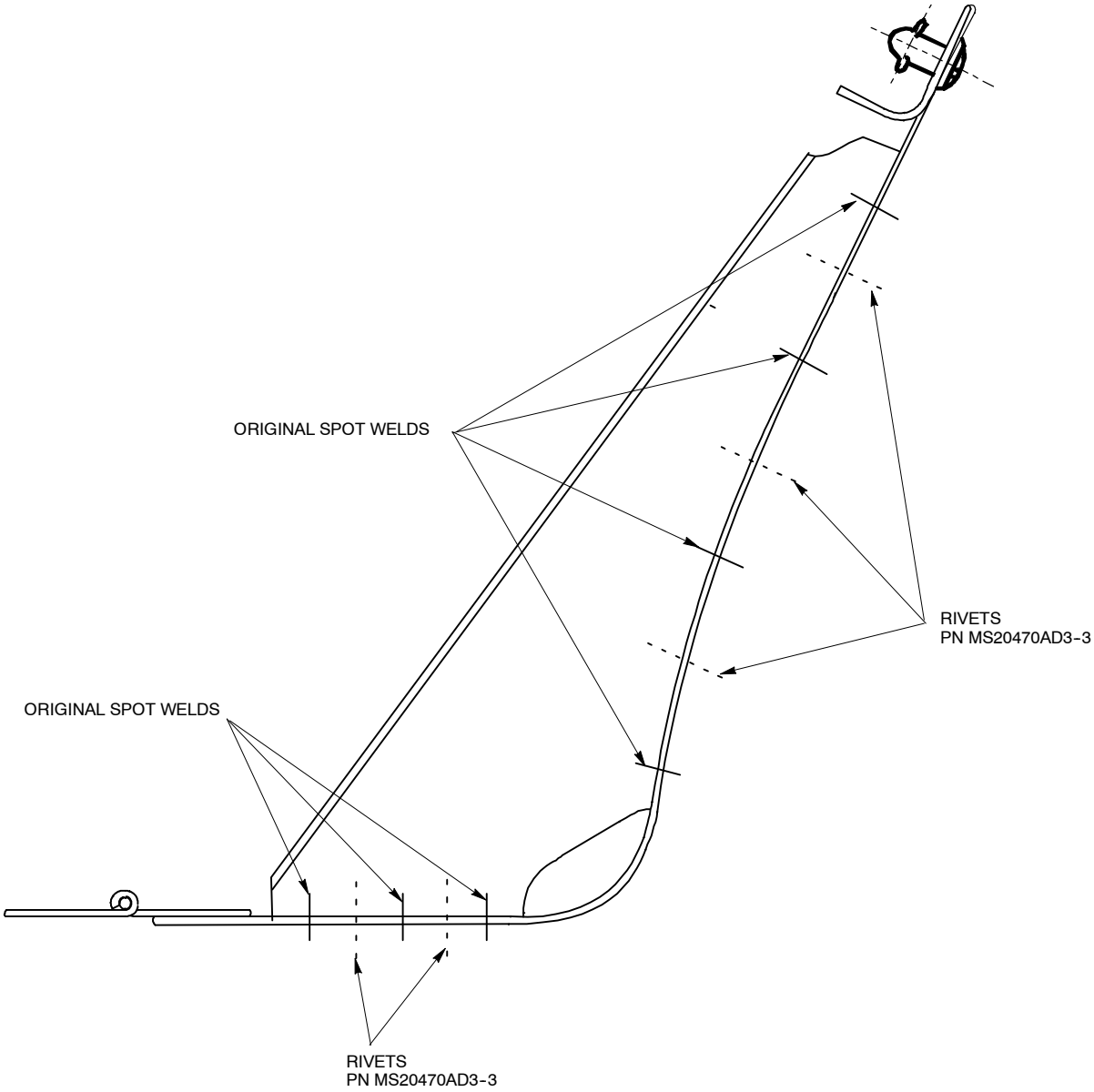

TYPICAL (REFER TABLE 1, ITEMS 1 - 8)

Figure 6 Trailing Edge Door Riblets

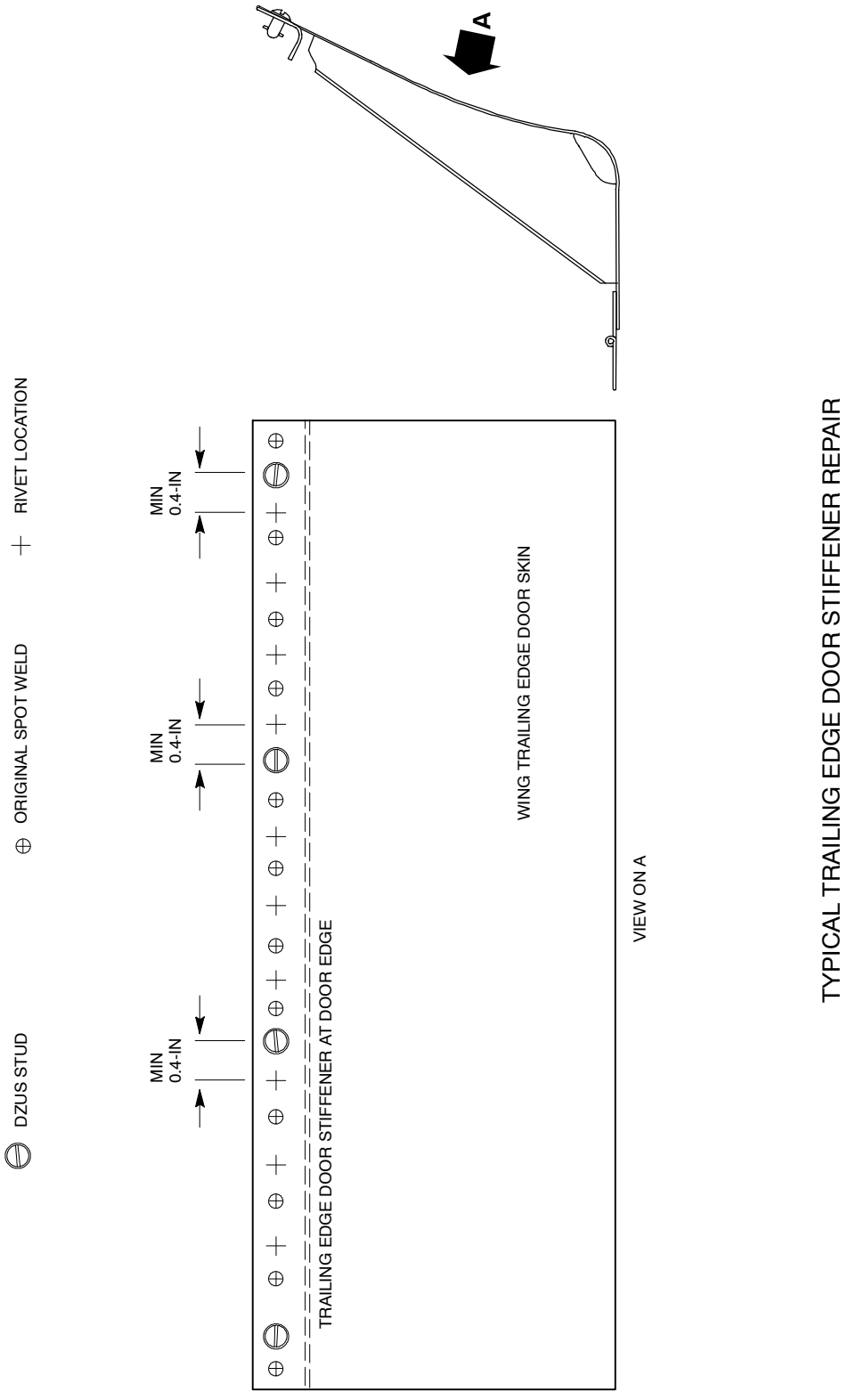

Figure 7 Trailing Edge Door Stiffener - at Door Edge

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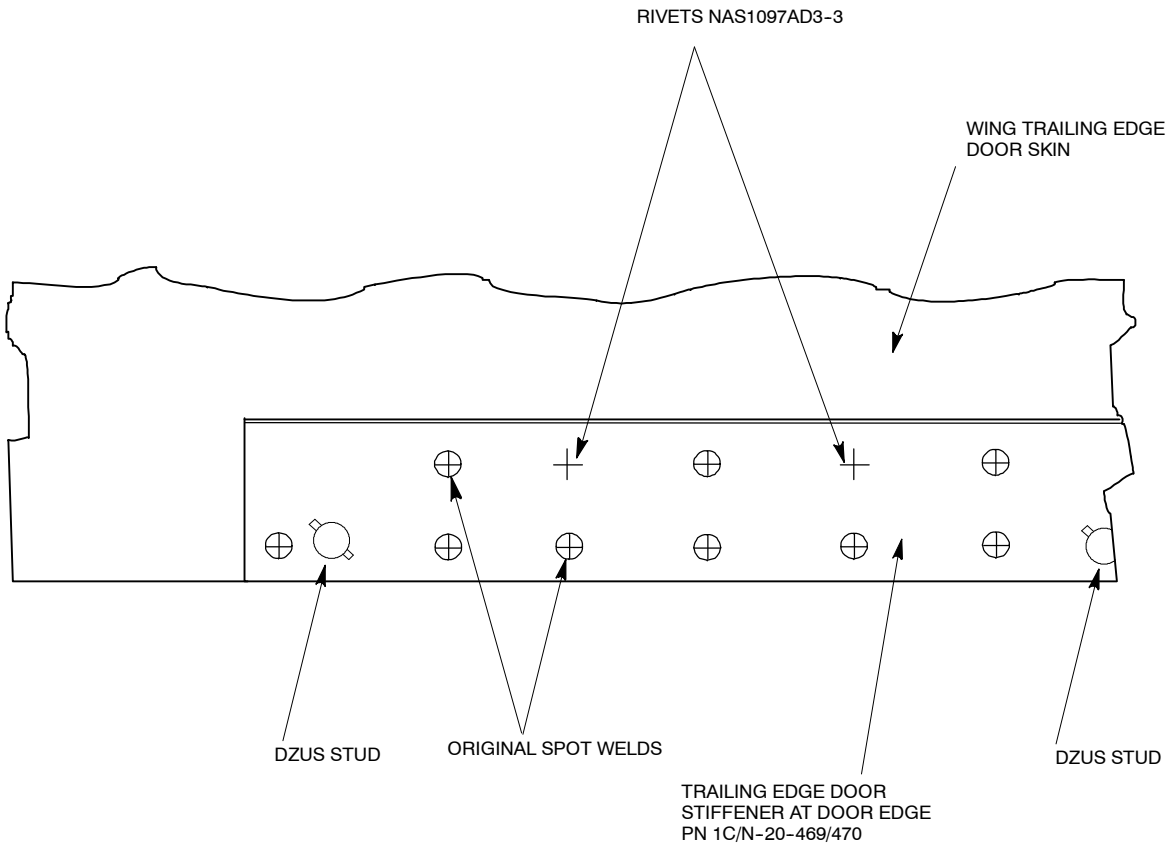

TYPICAL REPAIR FOR THE OUTBOARD END OF ITEM 5 (REF TABLE 1)

Figure 8 Trailing Edge Door Stiffener - at Door Edge