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SERVICE BULLETIN

NUMBER: SB 500-53-005, REV B
MODEL: ECLIPSE EA500
SUBJECT: NOSE PANEL AND RADOME SEALING

1. PLANNING INFORMATION

A. Effectivity

Aircraft Serial Numbers 0001-0399.

B. Reason

To ease nose panel and radome removal/installation and enhance the appearance of the nose area of the aircraft.

Revision B change: Updated effectivity to S/N 0399

C. Description

This Service Bulletin reworks the sealing of the nose panel and radome.

D. Relevant Publications

None

E. Compliance

Eclipse Aerospace Inc. considers this to be a recommended upgrade that can be accomplished at the operator's discretion.

F. Approval

This Service Bulletin is based on engineering data that is FAA-approved, and the modification herein complies with the applicable regulations.

G. Labor Requirements

The following information is for planning purposes only.

(1) Estimated labor hours to perform:

Suggested number of personnel: 1

Nose Panel and Radome Sealing: 4 Hours

Total labor hours: 4

The above is an estimate based on properly equipped and experienced personnel complying with this Service Bulletin. Actual labor hours may vary depending on workforce experience, concurrent maintenance, discovery of other discrepancies, etc.

(2) Qualification of personnel:

- A person properly authorized to perform aircraft maintenance under 14 CFR 43 or equivalent approved by the Civil Aviation Authority having jurisdiction.

H. Weight and Balance Change

None

**SERVICE BULLETIN****I. Electrical Load Data Change**

None

J. Software Accomplishment Summary

Not applicable

K. References

Aircraft Maintenance Manual (AMM) P/N 06-117751, latest revision.

L. Publications Affected

Temporary Revision TR 20-1 to Aircraft Maintenance Manual (AMM) P/N 06-117751, revision 18.

2. MATERIAL INFORMATION**A. Materials**

No parts are required for this SB.

B. Consumables

The following consumables are required for this Service Bulletin.

Material	Specification	Use
Sealant	PRC-Desoto PR-2050 or PR-2001 or AC 240 B½ or AC 350½ or equivalent meeting specification of AMS-S-8802	Form-In-Place Seal
Sealant	Dow Corning DC732	Form-In-Place Seal
Alodine	1201	Chemical Conversion for untreated metal
Primer	MIL-PRF-23377	Touch-up primer
Topcoat Polyurethane Paint	CA8800/11050	Touch-up exterior paint
Painter Tape	3M	To protect exterior surfaces from sealant over spill.
PTFE Conformable Tape	McMaster-Carr P/N 76025A691 or 3M P/N 5491 or equivalent (0.75 maximum width X 0.007 maximum thickness)	To prevent noise from nose panel.
Alcohol	Isopropyl	Cleaning

C. Interchangeability/Intermixability of Parts

None

D. Part Re-identification

None



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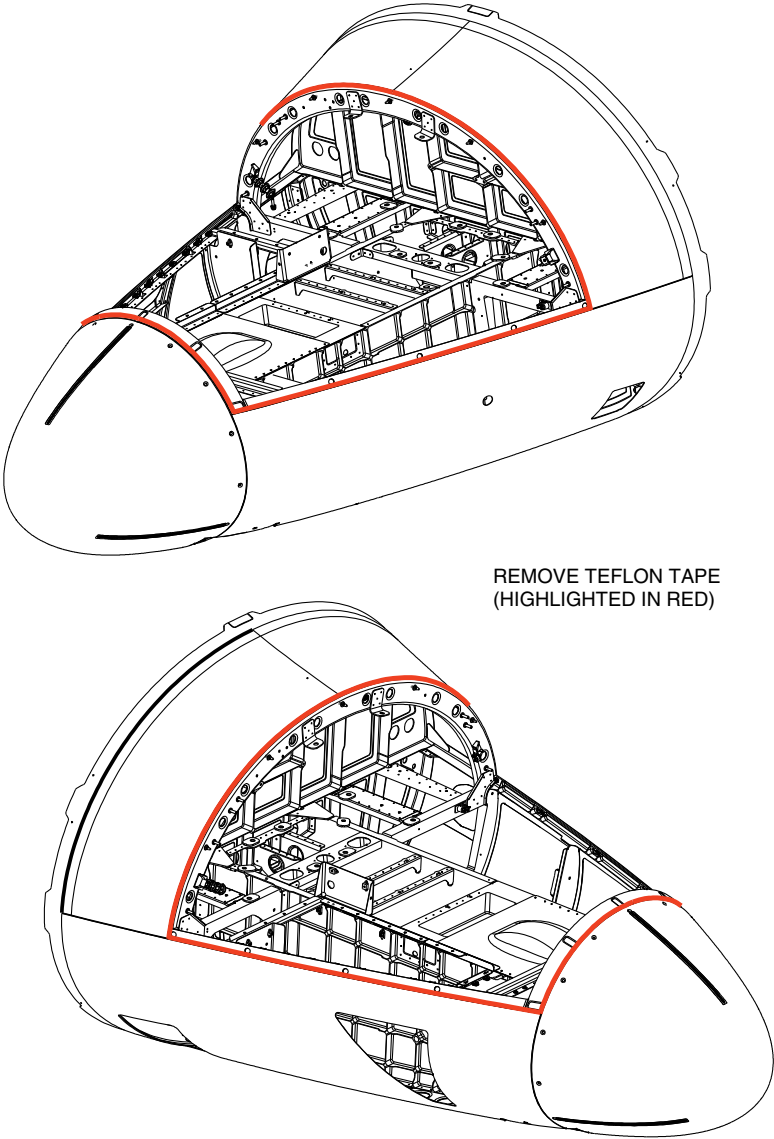
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SERVICE BULLETIN

3. ACCOMPLISHMENT INSTRUCTIONS

A. Procedure

- (1) Make the aircraft safe for maintenance. Refer to AMM 20-00-01 MAKE SAFE FOR MAINTENANCE.
- (2) Remove Nose Access Panel - 211 CT. Refer to AMM - 53-10-11 - NOSE ACCESS PANEL - REMOVAL.
- (3) Remove Radome - 211 AT. Refer to AMM - 53-10-12 - RADOME - REMOVAL.
- (4) Remove the conformable PTFE tape installed along the aircraft structure. Clean any residue with isopropyl alcohol. Refer to [Figure 1](#).

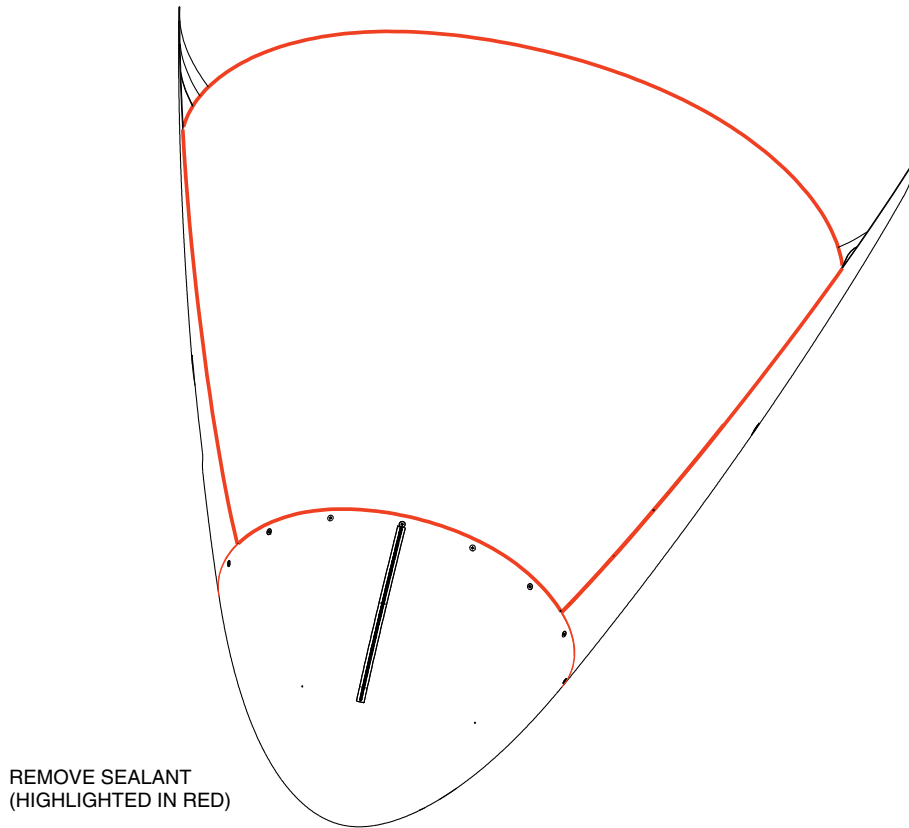


**Conformable PTFE Tape Removal
Figure 1**



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- (5) Remove all instances of sealant along the perimeter of where Nose Access Panel - 211 CT and Radome - 211 AT mates the nose structure. Refer to [Figure 2](#).



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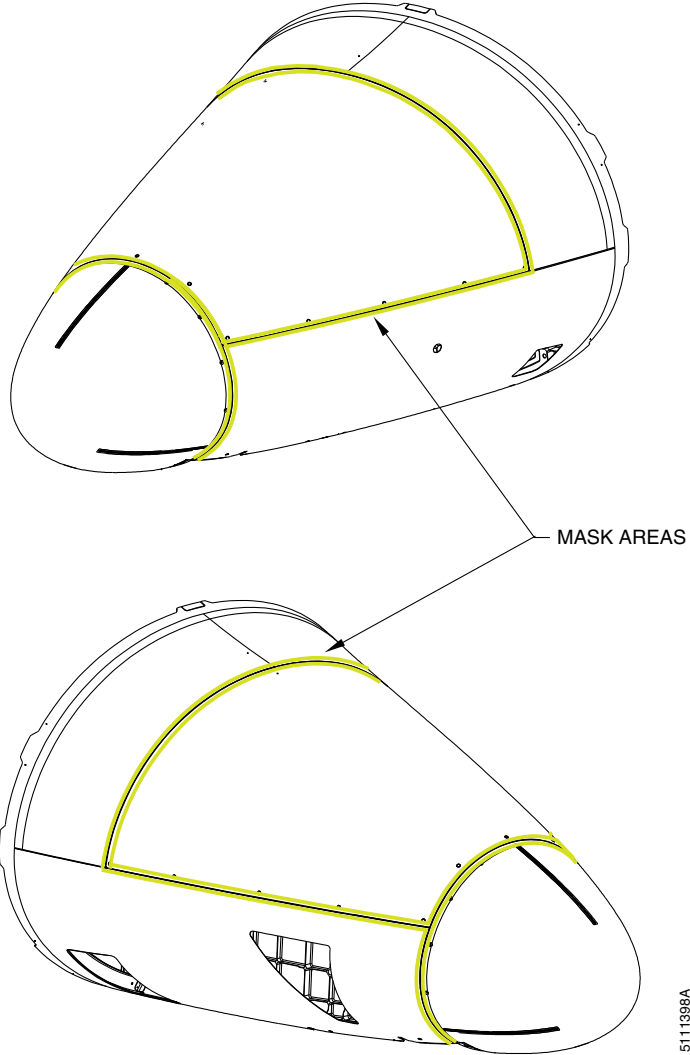
**Sealant Removal
Figure 2**

- (6) Remove all instances of sealant along the perimeter and edges of the Radome - 211 AT.
 - (a) Touch-up any scratched or bare aluminum with Alodine, primer and topcoat if necessary. Refer to AMM - 20-09-00 - AIRCRAFT FINISHES.
 - (b) Touch-up any scratched or bare composite with primer and topcoat if necessary. Refer to AMM - 20-09-00 - AIRCRAFT FINISHES.
- (7) Remove all instances of sealant along the perimeter and edges of the Nose Access Panel - 211 CT.
 - (a) Touch-up any scratched or bare aluminum with Alodine, primer and topcoat if necessary. Refer to AMM - 20-09-00 - AIRCRAFT FINISHES.



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- (8) Create form-in-place seal as follows:
 - (a) Clean mating surfaces on the nose structure, Nose Access Panel - 211 CT and Radome - 211 AT with isopropyl alcohol.
 - (b) Mask inner and outer perimeter of the Nose Access Panel - 211 CT exterior, nose structure and Radome - 211 AT with Painters Tape. [Figure 3](#).



**Mask With Painter Tape
Figure 3**

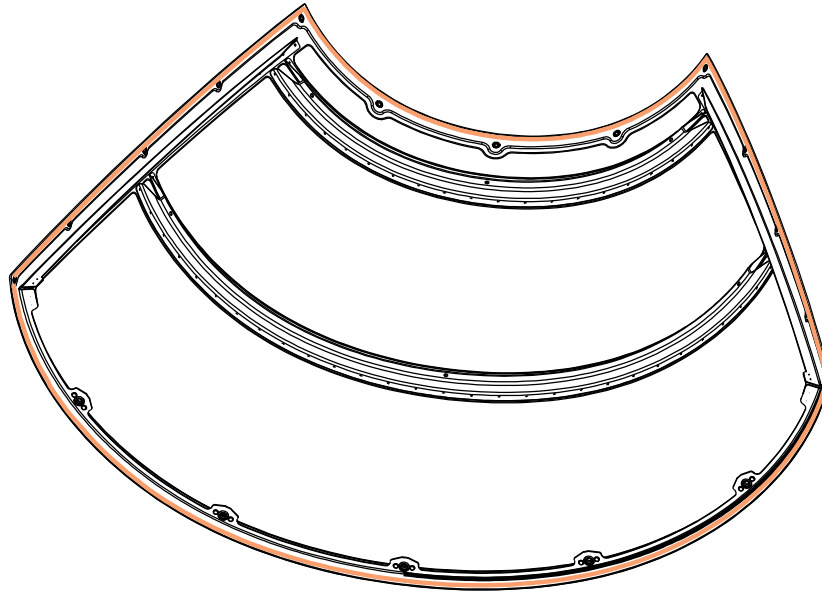


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- (c) Install conformable PTFE tape along outer perimeter of the inner side of Nose Access Panel - 211 CT. Cut holes for screws to pass through. Refer to [Figure 4](#).



UNDERSIDE OF NOSE PANEL

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PTFE Tape Application Figure 4

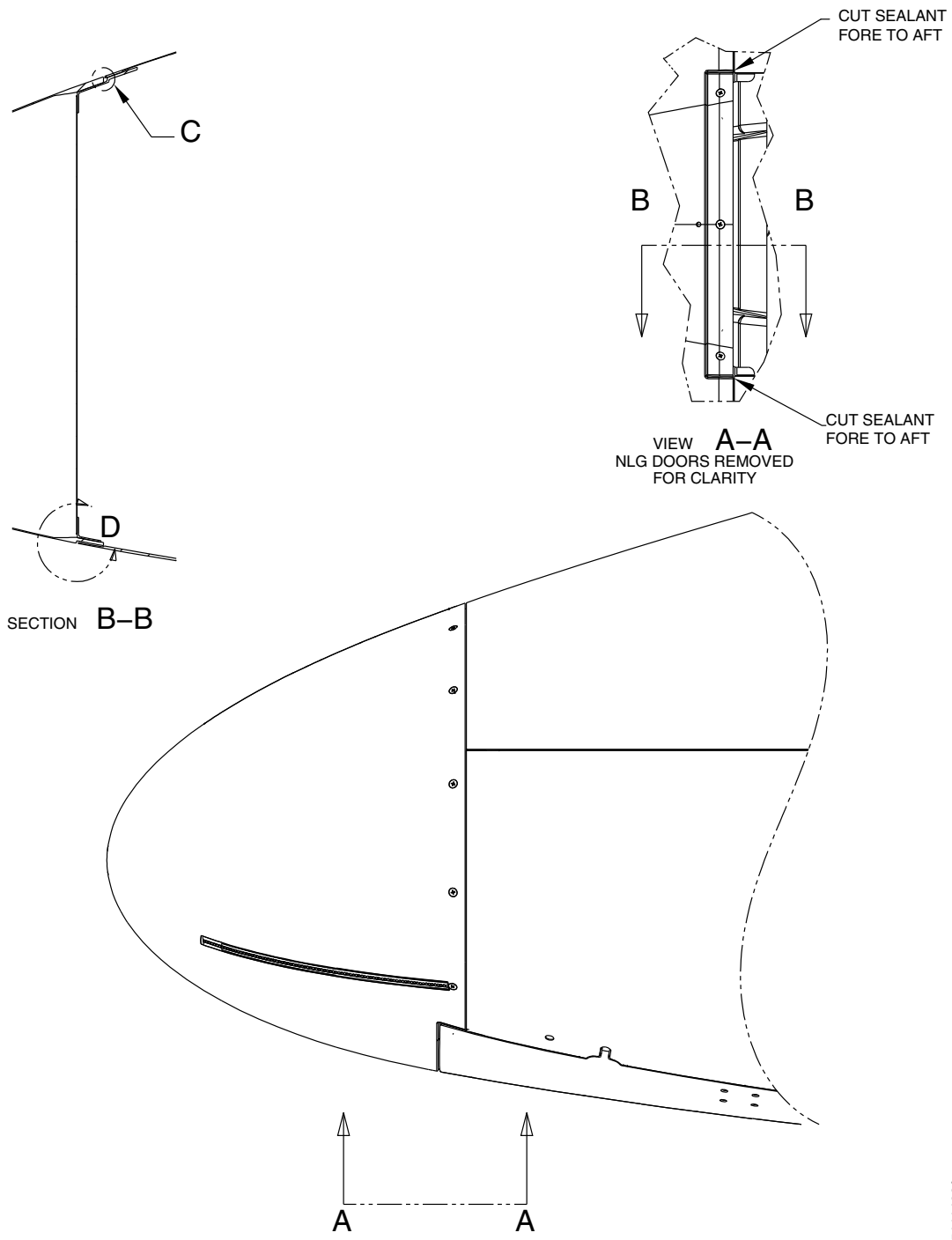
- (d) Apply Release Agent McLube 1733 along the perimeter of the inner lip and edge of Nose Access Panel - 211 CT where the panel will make contact with the form-in-place seal.
- NOTE: It is acceptable to apply Release Agent McLube 1733 to the conformable PTFE tape.
- (e) Apply Release Agent McLube 1733 along the perimeter of the inner lip and edge of the Radome - 211 AT where the panel will make contact with the form-in-place seal. Do not apply Release Agent McLube 1733 to the area on the Radome - 211 AT where the radome mates with the nose landing gear doors. Refer to [Figure 5, Sheet 1](#).
1. Apply Release Agent McLube 1733 to the nose landing gear doors where the nose landing gear doors overlap the Radome - 211 AT. Refer to [Detail D, Figure 5, Sheet 1, Sheet 2](#) and [Figure 5, Sheet 3](#).



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**Radome Form-In-Place Seal
Figure 5 (Sheet 1 of 5)**

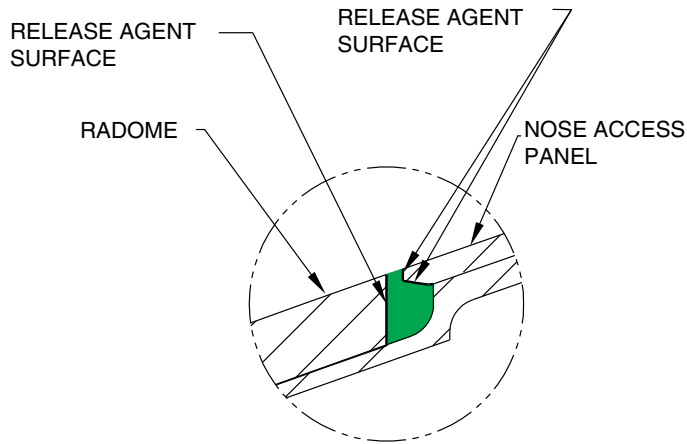


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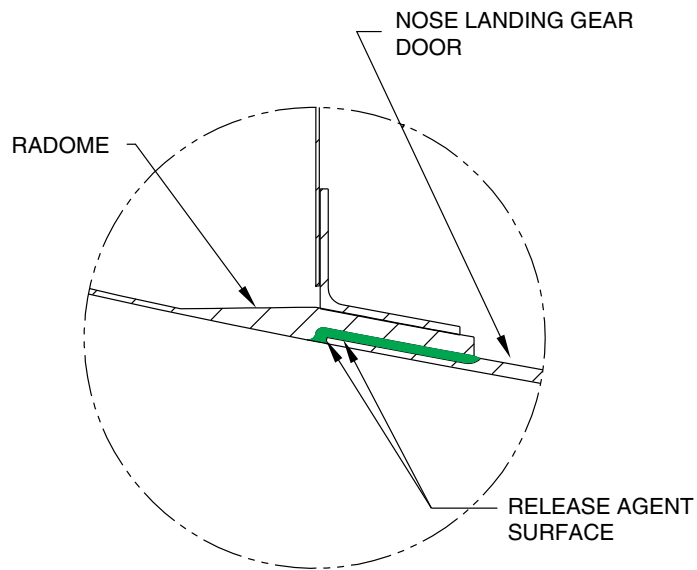
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NOTE: SEALANT SHOW IN GREEN.



DETAIL C



DETAIL D
(NOSE LANDING GEAR DOOR AREA)

**Radome Form-In-Place Seal
Figure 5 (Sheet 2 of 5)**

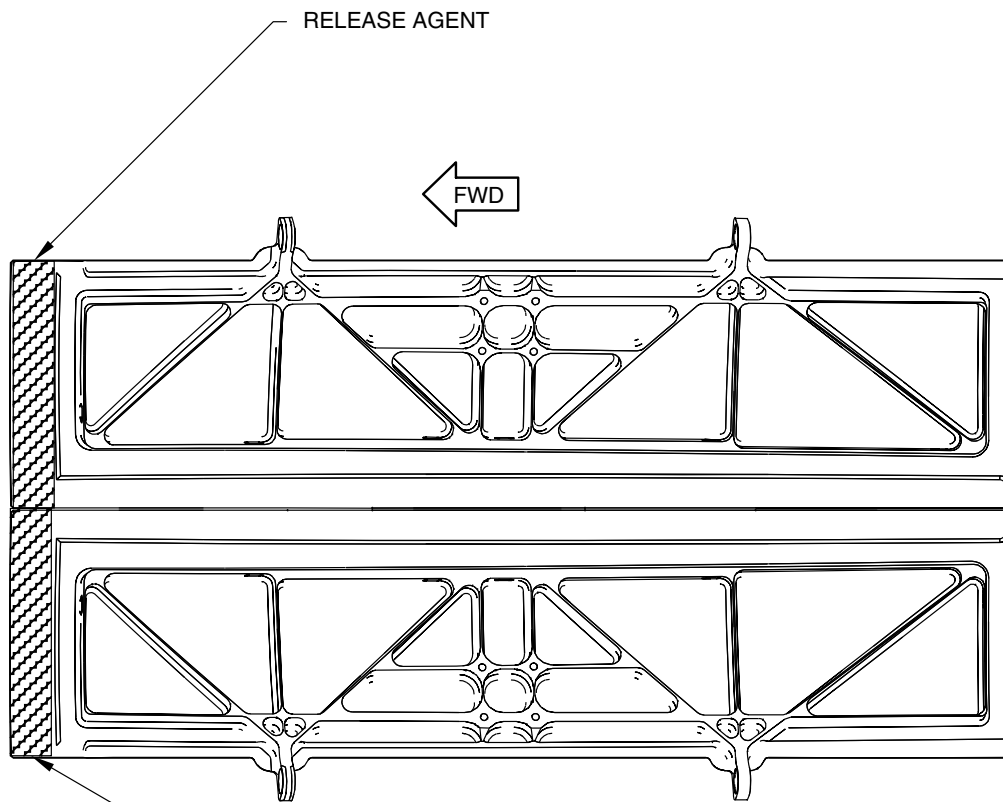
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RELEASE AGENT
NOSE LANDING GEAR DOORS
VIEW LOOKING FROM INSIDE OUT
(DOORS SHOWN REMOVED FOR CLARITY)

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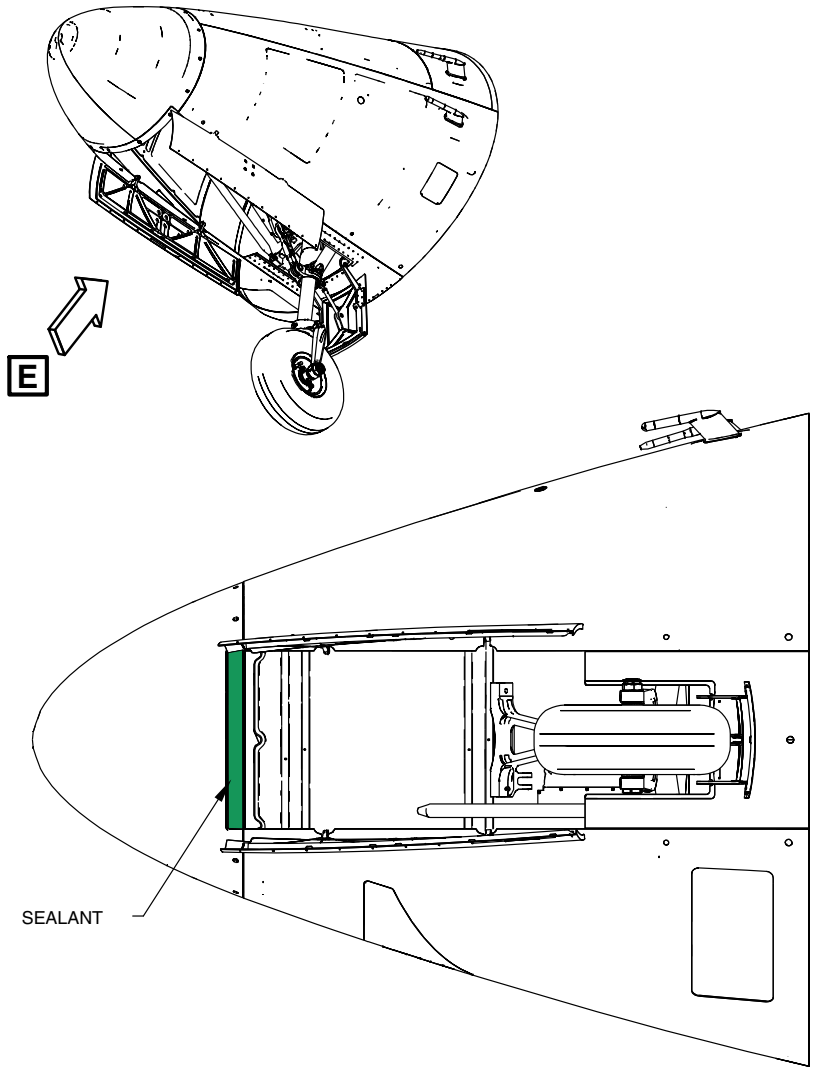
**Nose Landing Gear Doors Release Agent Application
Figure 5 (Sheet 3 of 5)**



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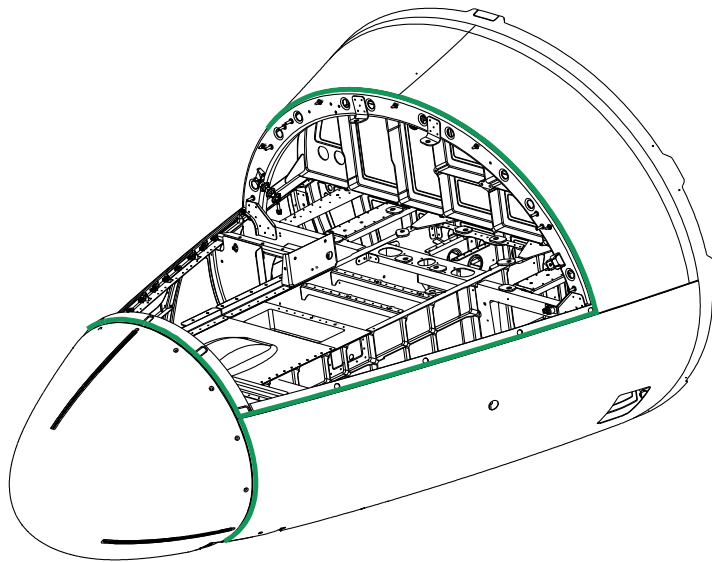
DETAIL E

**Radome Form-In-Place Seal
Figure 5 (Sheet 4 of 5)**

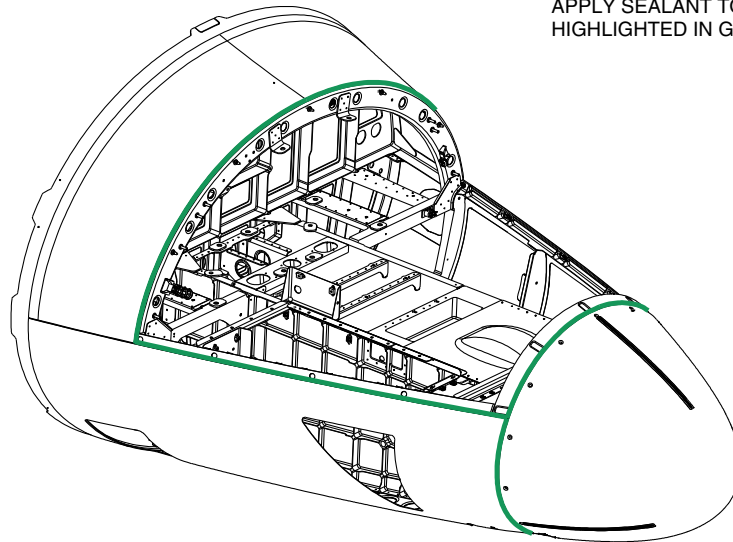
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APPLY SEALANT TO AREAS
HIGHLIGHTED IN GREEN



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Form-In-Place Seal
Figure 5 (Sheet 5 of 5)

- (f) Apply a bead of PRC-Desoto P/N PR-2050 or equivalent sealant (listed in Consumables List) along the outer perimeter of nose structure where Nose Access Panel - 211 CT and Radome - 211 AT mate. Do not apply sealant to the Radome - 211 AT where the nose landing gear doors overlap the Radome - 211 AT. Refer to [Figure 5, Sheet 5](#).

NOTE: Dow Corning DC732 may be used in lieu of PRC-Desoto P/N PR-2050 or equivalent sealant (listed in Consumables List) on the right, left and aft edges of Nose Access Panel - 211 CT. PRC-Desoto P/N PR-2050 or equivalent sealant (listed in Consumables List) must be used for the entire perimeter of the Radome - 211 AT, including areas common to Nose Access Panel - 211 CT and Radome - 211 AT.



SERVICE BULLETIN

NOTE: Keep sealant out of screw holes.

1. Apply a bead of PRC-Desoto P/N PR-2050 or equivalent sealant (listed in Consumables List) along the lower surface of the Radome - 211 AT where they overlap the nose landing gear doors.
 - (g) Put the Nose Access Panel - 211 CT on the nose structure and align the holes.
 - (h) Attach the Nose Access Panel - 211 CT to the nose structure with 13 screws. Tighten the screws to hand tight.
 - (i) Put the Radome - 211 AT on the radar bulkhead and align the holes.
 - (j) Attach the Radome - 211 AT to the radar bulkhead with 14 screws. Tighten the screws to hand tight.
 - (k) Close the nose landing gear doors.
 - (l) Work sealant for flushness and wipe the excess sealant from the mating area. Make sure that transition from Radome - 211 AT to Nose Access Panel -211 CT is uniform. Work sealant to avoid excessive step.
 - (m) Allow the sealant to cure. Refer to manufacturer's instructions for cure time.
 - (n) Remove the 13 screws that attach Nose Access Panel - 211 CT to nose structure.
 - (o) Remove the Nose Access Panel - 211 CT from aircraft. Nose Access Panel - 211 CT should separate without sticking to the sealant.
 - (p) Open the nose landing gear doors.
 - (q) Remove the 14 screws that attach Radome - 211 AT to the radar bulkhead.
 1. Cut the sealant fore to aft at the corners on the lower Radome - 211 AT. Refer to [\(View A-A, Figure 5, Sheet 1\)](#)
 - (r) Remove the Radome - 211 AT from aircraft. Radome - 211 AT should separate without sticking to the sealant.
 - (s) Inspect the form-in-place seal for cracking, tears and flushness.
 - (t) Trim off excess sealant along the edge of the painters tape on the nose structure where Nose Access Panel – 211 CT Mates. Remove Painters tape from all surfaces.
- CAUTION: Use care when cutting the sealant as not to scratch the metal.
- (u) Touch-up any scratched or bare aluminum with Alodine, primer and topcoat if necessary.
 - (9) Put the Nose Access Panel - 211 CT on the nose structure and align the holes. Use care as not to tear seal.
 - (10) Attach the Nose Access Panel - 211 CT to the nose structure with 13 screws. Torque the screws to 30-40 lbf.in.
 - (11) Put the Radome - 211 AT on the radar bulkhead and align the holes. Use care as not to tear seal.
 - (12) Attach the Radome - 211 AT with 14 screws. Torque the screws to 15–20 lbf.in.
 - (13) Topcoat PRC-Desoto PR-2050 sealant with aircraft topcoat paint. Allow the paint to dry.
 - (14) Inspect area for chipped or scratched paint. Touch-up any scratched or bare aluminum with Alodine, primer and topcoat if necessary. Refer to AMM - 20-09-00 - AIRCRAFT FINISHES.
 - (15) If all other maintenance is complete, return the aircraft to service. Refer to the AMM 20-00-02 RETURN TO SERVICE (AFTER MAINTENANCE).



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B. Limitations and Procedures

None

C. Parts Disposition

Not applicable

D. Cost

Contact Eclipse Aerospace Inc. for cost and availability.

4. RECORD OF COMPLIANCE

Upon completion of this Service Bulletin, make an appropriate maintenance-record entry specifying the Service Bulletin number.

5. NOTIFYING ECLIPSE AEROSPACE

On completing this service bulletin, the operator/maintainer shall complete the attached Compliance Record and send it to Eclipse Aerospace via regular mail, fax, or e-mail.

Mailing Address	Eclipse Aerospace Inc. ATTN: Customer Care 2503 Clark Carr Loop SE Albuquerque, NM 87106
Fax	1-505-241-8802
E-mail	customerfirstteam@eclipseaerospace.net

