



**OPTIONAL**

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## SERVICE BULLETIN

**NUMBER:** SB 500-21-004, REV C  
**MODEL:** ECLIPSE EA500  
**SUBJECT:** VORE SEAL INSTALLATION

### 1. PLANNING INFORMATION

#### A. Effectivity

Aircraft Serial Numbers 0001 - 0300.

#### B. Reason

This Service Bulletin has been prepared to add seals to the Variable Outlet Ram Exhaust (VORE) to improve cabin heating.

Revision B changes: Corrected typo for tolerance in Adjustment/Test. Was: 0.98 Is: .098. Revised Figure 3 for clarity of foam installation.

Revision C changes: Added VORE Butterfly/panel gap measurement and DSP0018-250 (white) or DSP0048-250 (Gray) for VORE Butterfly/panel gaps greater than 0.125 inch.

#### C. Description

This Service Bulletin provides procedures to add seals to the VORE.

#### D. Relevant Publications

None

#### E. Compliance

Eclipse Aerospace Incorporated considers this to be an optional modification that can be accomplished at the operator's discretion based on the operator's requirements.

#### 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

Job Set-up and Job Close-up: 1.0 Hours

Installation: 2 Hours

**Total labor hours: 3.0**

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 under 14 CFR 43 to perform aircraft maintenance.

**SERVICE BULLETIN****H. Weight and Balance Change**

N/A

**I. Electrical Load Data Change**

N/A

**J. References**

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

**K. Publications Affected**

Temporary Revision to Aircraft Maintenance Manual (AMM), P/N 06-117751-TR21-2.

**2. MATERIAL INFORMATION****A. Consumables**

The following consumables are required for this Service Bulletin.

| Material                  | Specification   | Use  |
|---------------------------|---|--|
| Silicone Foam - Open Cell | Diversified Silicone Products, INC. P/N DSP0018-125 (White) or DSP0048-125 (Gray) without Pressure Sensitive Adhesive (PSA). Alternate for wider gaps: DSP0018-250 (White) or DSP0048-250 (Gray) without PSA. | VORE Sealing                                     |
| Adhesive                  | RTV 106   | VORE Sealing                                     |
| Cleaning Solvent          | Isopropyl Alcohol/Water (50/50 mix)   | To clean area before Silicone Foam installation. |

**B. Tooling**

The following special tooling/support equipment is required to accomplish this Service Bulletin.

| Nomenclature   | Specification   | Use             |
|--|---|-----------------|
| Avio Maintenance Computer (AMC)                                      | EAI 20-120576-1001 or 20-121926-1001, SW version "1.5.71 or higher" for Pre-Avio NG aircraft and "2.2.02 or higher" for Avio NG aircraft. | Adjustment/Test |
| USB to Ethernet Adapter  | SMC2209   | Adjustment/Test |
| 10 Foot Ethernet Crossover Cable or 25 Foot Ethernet Crossover Cable | EAI, PN 87-120877-1001 (10 foot cable) or EAI, PN 87-120878-1001 (25 Foot cable)  | Adjustment/Test |

**C. Interchangeability/Intermixability of Parts**

None



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**D. Part Re-identification**

None.

**3. ACCOMPLISHMENT INSTRUCTIONS**

**A. Procedure**

**(1) Job Set-up,**

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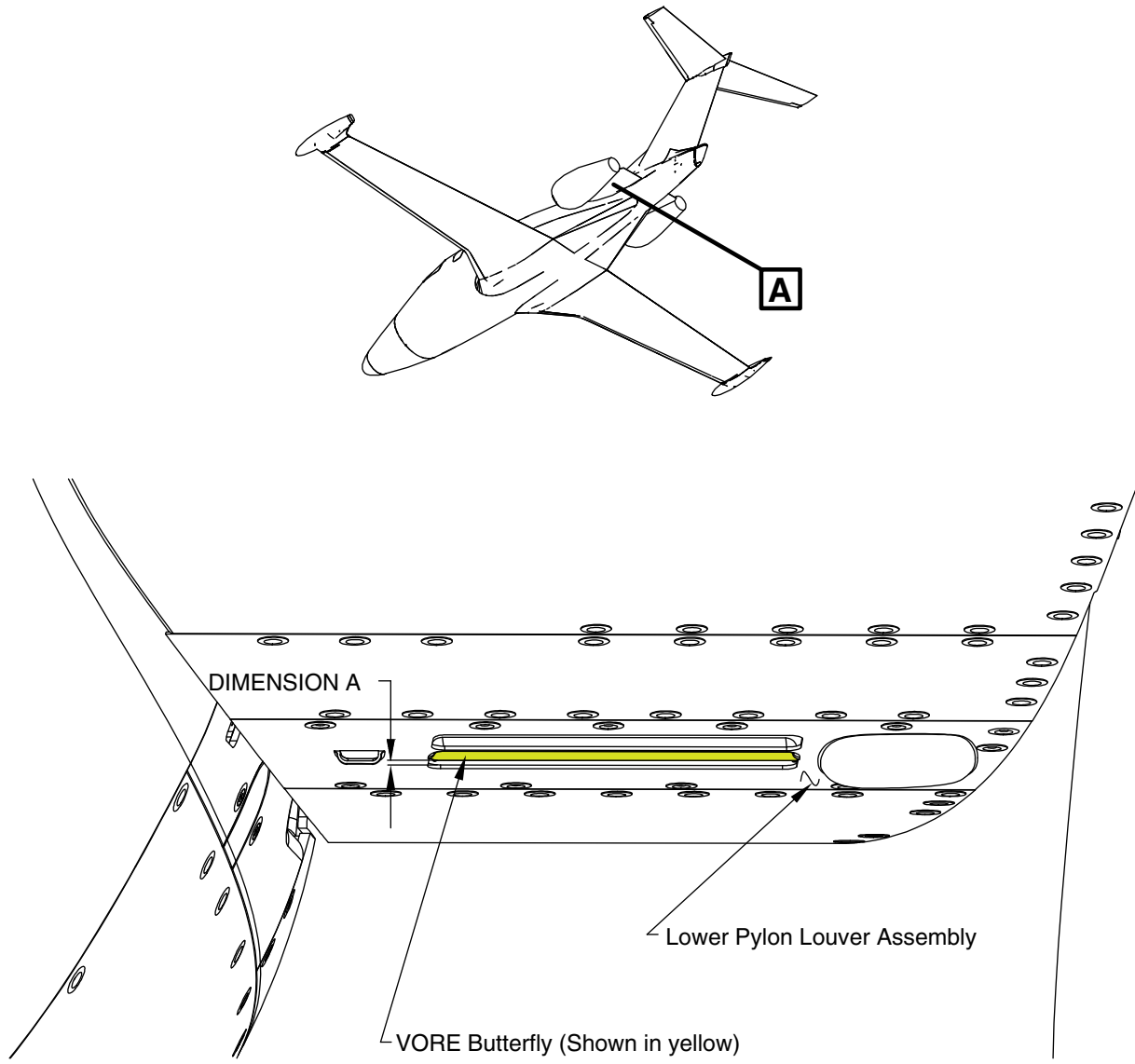
- (a) Make the aircraft safe for maintenance. Refer to AMM - 20-00-01 - MAKE SAFE FOR MAINTENANCE. \_\_\_\_\_
- (b) Measure gap distance at the widest point between Left VORE Butterfly and interior of Left Lower Pylon Louver Assembly - 311 KL. If Dimension A is greater than 0.125 inch use DSP0018-250 (0.25 inch thickness) or DSP0048-250 (0.25 inch thickness), otherwise use DSP0018-125 (0.125 inch thickness) or DSP0048-125 (0.25 inch thickness). Refer to [Figure 1](#). \_\_\_\_\_
- (c) Measure gap distance at the widest point between Right VORE Butterfly and interior of Right Lower Pylon Louver Assembly - 312 GR. If Dimension A is greater than 0.125 inch use DSP0018-250 (0.25 inch thickness) or DSP0048-250 (0.25 inch thickness), otherwise use DSP0018-125 (0.125 inch thickness) or DSP0048-125 (0.25 inch thickness). Refer to [Figure 1](#). \_\_\_\_\_



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A

LEFT SIDE SHOWN (RIGHT SIDE OPPOSITE)  
VIEW LOOKING FWD AND UP

**VORE Butterfly Gap Measurement  
Figure 1**

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- (d) Remove Left Lower Pylon Louver Assembly - 311 KL and Right Lower Pylon Louver Assembly - 312 GR. Refer to AMM - 54-30-16-B - LOWER LOUVER PYLON SKIN - REMOVAL. \_\_\_\_\_
- (e) Cut two strips of Silicone Foam - Open Cell P/N DSP0018-125 (white) or DSP0048-125 (Gray) from sheet to dimension .25 inch wide by 7.06 inches long. \_\_\_\_\_
- (f) Cut two strips of Silicone Foam - Open Cell P/N DSP0018-125 (white) or DSP0048-125 (Gray) from sheet to dimension .25 inch wide by 7.25 inches long. \_\_\_\_\_

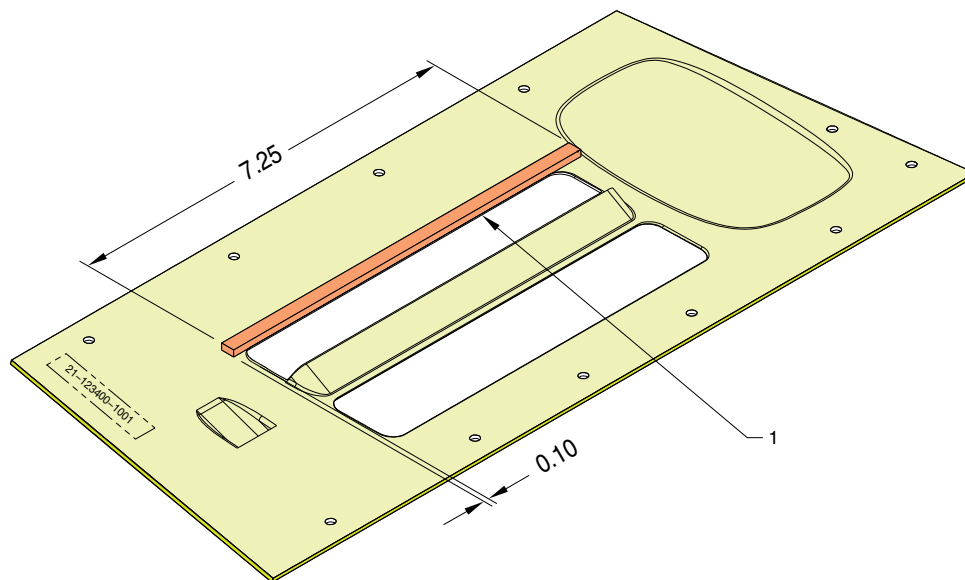
NOTE: If Dimension A (Figure 1) is greater than .125 inch use DSP0018-250 (white) or DSP0048-250 (Gray).

**(2) Rework Left and Right Lower Pylon Louver Assemblies:**

- (a) Clean area where Silicone Foam - Open Cell is to be applied with Isopropyl Alcohol/Water (50/50 mix). Allow to dry. \_\_\_\_\_
- (b) Apply a 7.25 inch strip of Silicone Foam - Open Cell P/N DSP0018-125 (white) or DSP0048-125 (Gray) (1, Figure 2) with RTV 106 Adhesive to Left Lower Pylon Louver Assembly - 311 KL and Right Lower Pylon Louver Assembly - 312 GR flush with opening. Allow RTV time to cure per manufacturer's instructions. \_\_\_\_\_

NOTE: If Dimension A (Figure 1) is greater than .125 inch use DSP0018-250 (white) or DSP0048-250 (Gray).

- (c) Part mark left and right assemblies 21-123400-1001 with indelible ink in area shown. Refer to Figure 2. \_\_\_\_\_



NOTE: COLOR OF SILICONE FOAM SHOWN AS ORANGE FOR CLARITY. ACTUAL COLOR WILL BE WHITE OR GRAY DEPENDING ON PRODUCT USED

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**Lower Pylon Louver Assembly, Left Side Shown, Right Side Opposite  
Figure 2**



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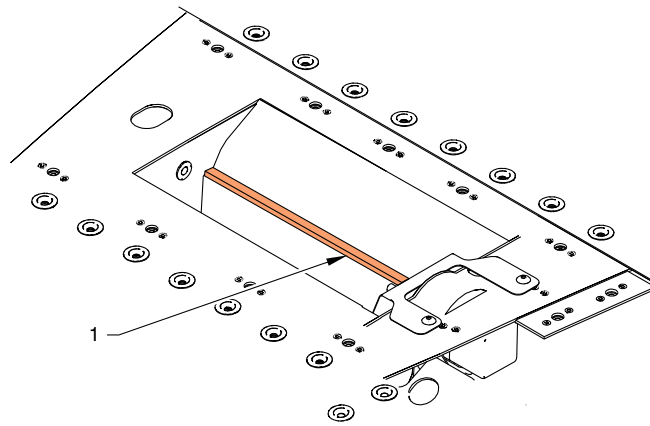
**(3) Rework Left and Right VORE Assemblies:**

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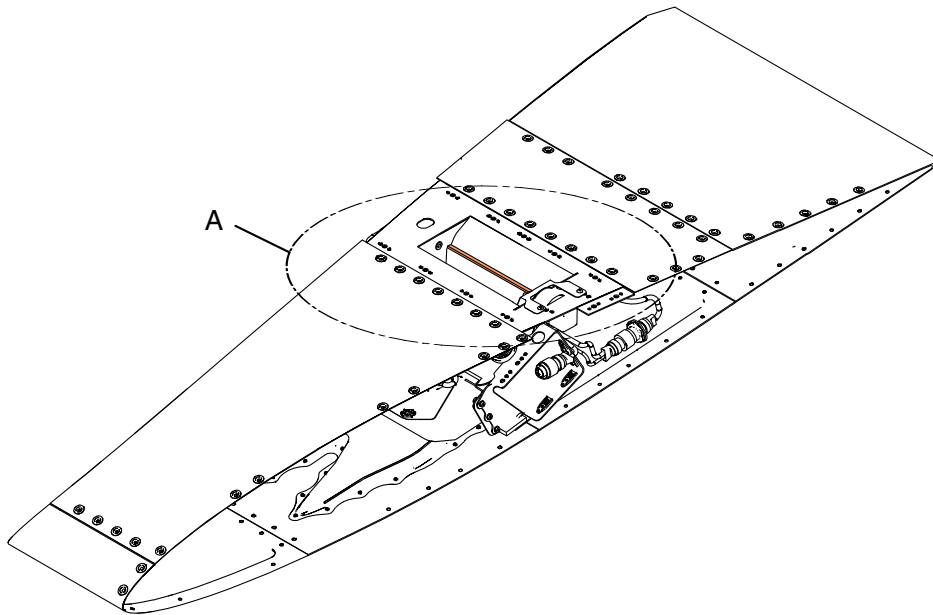
- (a) Clean area where Silicone Foam - Open Cell is to be applied with Isopropyl Alcohol/Water (50/50 mix). Allow to dry.
- (b) Apply a 7.06 inch strip of Silicone Foam - Open Cell P/N DSP0018-125 (white) or DSP0048-125 (Gray) (1, Figure 3) with RTV 106 Adhesive to ledge in the Left and Right BASS Assemblies. Allow RTV time to cure per manufacturer's instructions.

\_\_\_\_\_

\_\_\_\_\_



DETAIL A



NOTE: EXTERIOR PANEL AND BUTTERFLY DOOR REMOVED FOR CLARITY  
 NOTE: COLOR OF SILICONE FOAM SHOWN AS ORANGE FOR CLARITY.  
 ACTUAL COLOR WILL BE WHITE OR GRAY DEPENDING ON PRODUCT USED

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**VORE Rework  
Figure 3**



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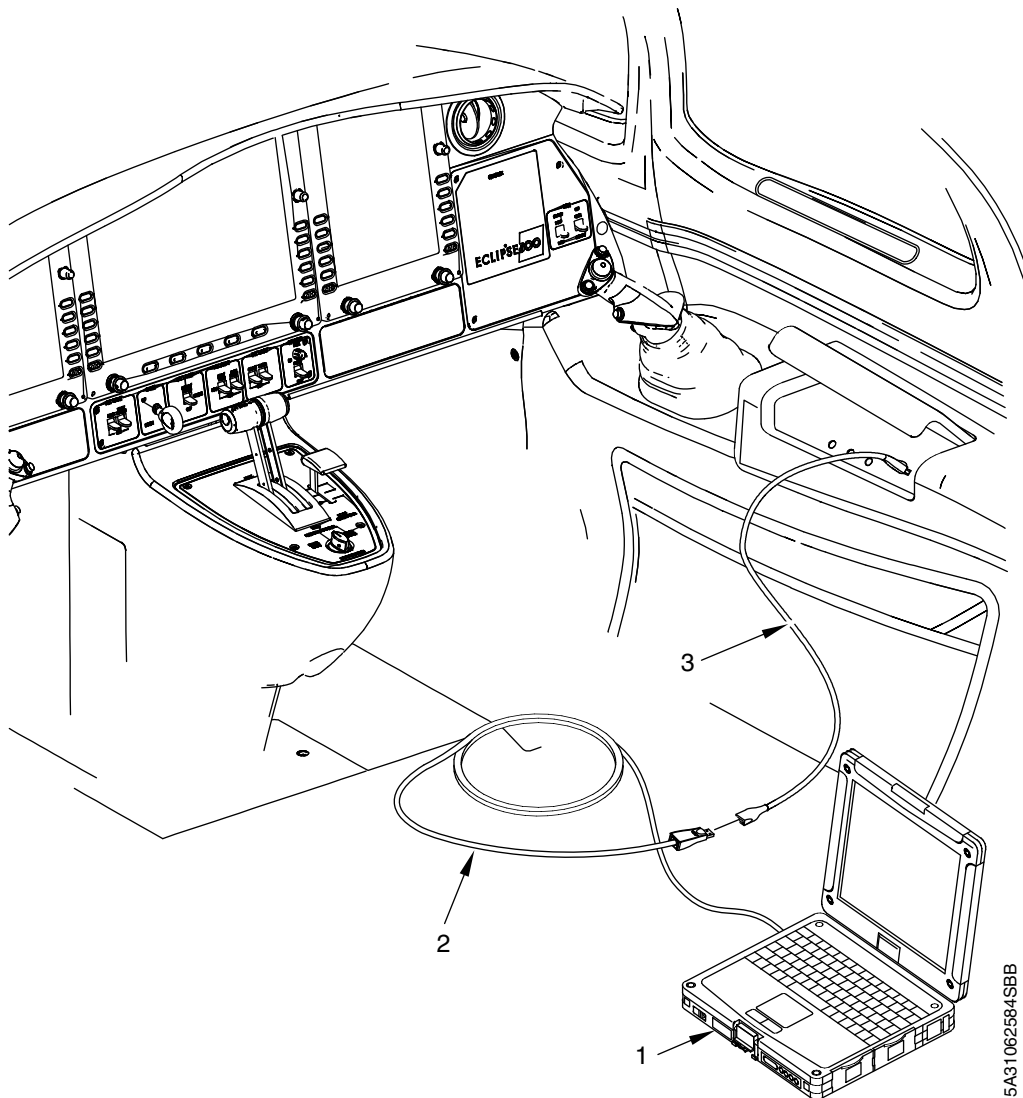
### (4) Adjustment/Test

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(a) Setup as follows:

1. Connect the AMC to the aircraft by connecting 10 Foot Ethernet Crossover Cable or 25 Foot Ethernet Crossover Cable to AMC Ethernet port and to USB to Ethernet Adapter. Connect USB to Ethernet Adapter to copilots armrest USB port. Refer to [Figure 4](#).

NOTE: The 25 Foot Ethernet Crossover Cable can be used if the AMC is to be used outside the aircraft in order to observe the doors.



AMC - Co-Pilot's Armrest USB Port Connection  
Figure 4



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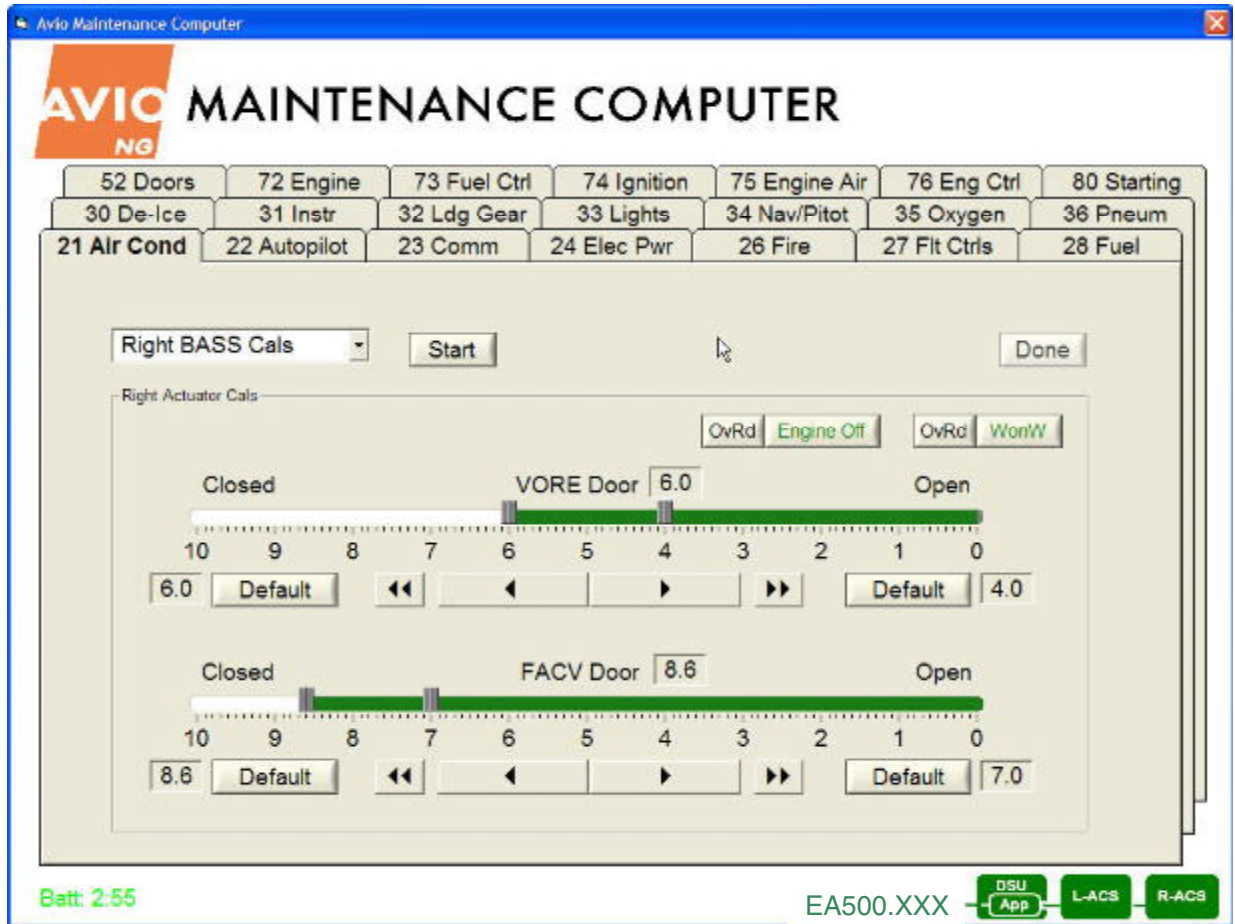
- 2. Power up aircraft. Refer to AMM - 24-40-00 - EXTERNAL POWER - MAINTENANCE PRACTICES. \_\_\_\_\_
- 3. On the IPL set the SYS BATT and START BATT Switches to the ON (up) position and BUS TIE to AUTO (up) position. On the right side of MFD press the PROCEED Soft Key. Clear any "MASTER CAUTIONS" and "MASTER WARNINGS" as needed. \_\_\_\_\_
- 4. Clear any MASTER CAUTIONS and MASTER WARNINGS as needed. \_\_\_\_\_
- 5. Scroll to the OPS page on the MFD. Select SYSTEM TEST. Select softkey A/C MAINT Mode ON. \_\_\_\_\_
- 6. Turn on AMC and let the computer boot-up and connect to the L and R ACS. \_\_\_\_\_
- 7. Make sure that the AMC is connected to the L and R ACS by the green box indications in the lower right corner of the screen. \_\_\_\_\_
- 8. If a pop-up appears, check EA500 box and enter the Aircraft Serial Number by selecting the numbers from the number pad, then select ENTER. \_\_\_\_\_

NOTE: If the aircraft is on jacks, use AMC WOW function (Tab 32) to set Weight-on- Wheels (WONW button).



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(b) Do a calibration of the right VORE as follows:



**Right BASS Cals**  
**Figure 5**

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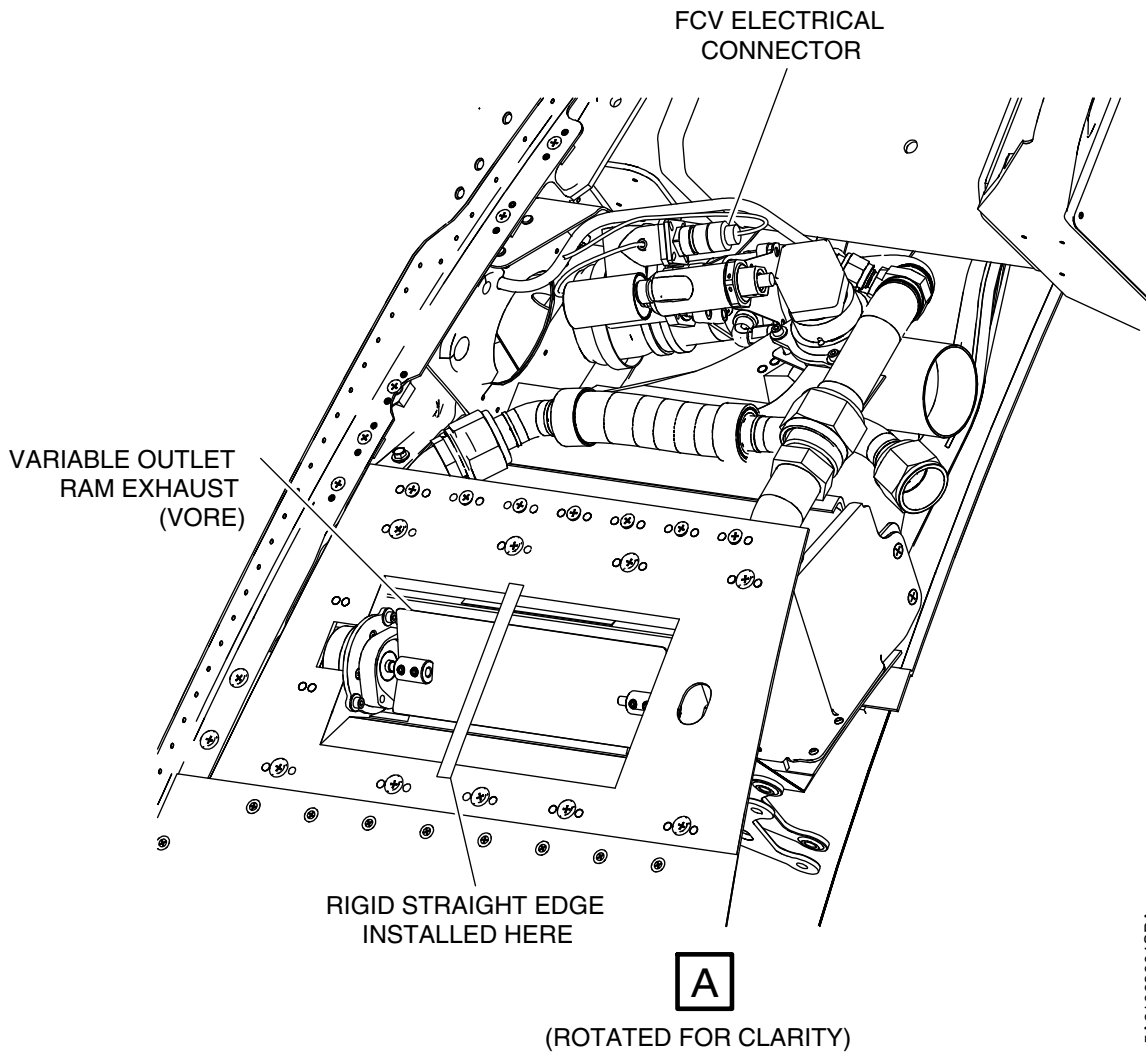
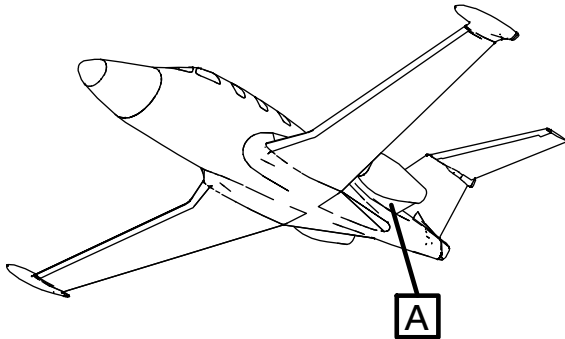
1. On the AMC, select Tab 21. \_\_\_\_\_
  2. On the AMC, select Right BASS Cals from the drop down menu. \_\_\_\_\_
  3. Select START on the AMC Tab 21 screen. \_\_\_\_\_
- NOTE: The AMC initiates actuator control and will show the actual position of doors.
4. Command the right VORE door to closed position using the ◀◀ button. \_\_\_\_\_
    - The right VORE door moves to the closed position. \_\_\_\_\_
- NOTE: If the VORE door is cycling when not commanded to cycle select the ▶▶ button on the AMC until the VORE door no longer cycles.
5. Tape a straight edge in place over the right VORE outlet on the lower BASS Module. Refer to Figure 6. \_\_\_\_\_



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**VORE Calibration  
Figure 6**



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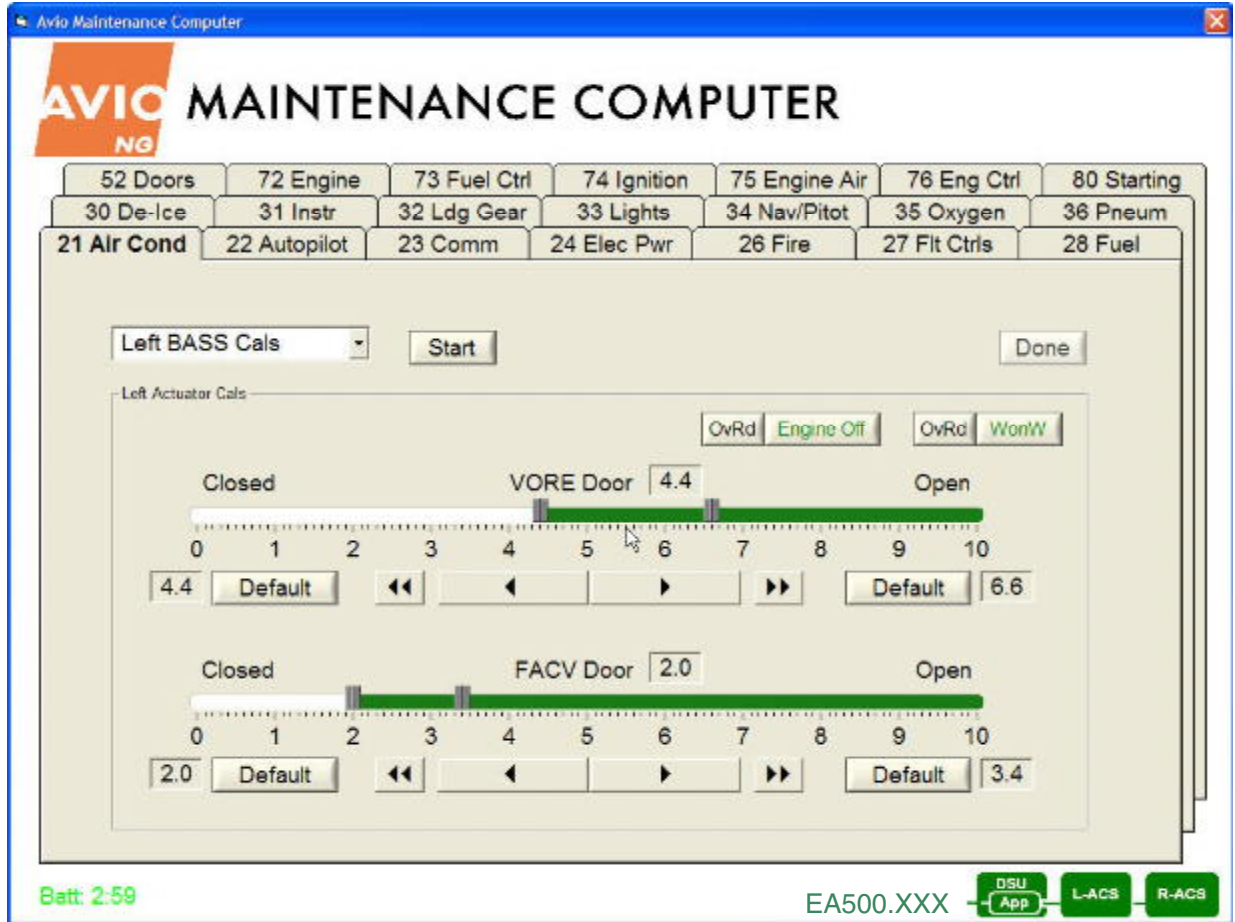
**SIGN OFF**

- 6. Observe the upper edge of the right VORE door.
  - Ensure the door is not touching the seal strip. \_\_\_\_\_
- 7. If the door is touching the seal strip:
  - a. While observing the right VORE door, open the door using the ► button until space is seen between the right VORE door and the seal strip. \_\_\_\_\_
- 8. While observing the right VORE door, close the door using the ◀ button, until the door touches the seal. \_\_\_\_\_
  - Compression of the seal strip is acceptable when the upper edge of the right VORE door has compressed the seal to place the door surface flush with the uncompressed seal. A short straight edge may be used to check this.
  - If necessary, depress the ◀ button to close the door, or depress the ► button to open the door.
- 9. Select the SET button for the right VORE closed position. \_\_\_\_\_
- 10. Command the right VORE door to the open position using the ►► button (select once). \_\_\_\_\_
- 11. Check the position of the right VORE door in the open position. \_\_\_\_\_
  - A gap between the lower edge of the right VORE door and the straight edge of 0.1 +/- 0.02 (Min .098 Max 0.12) is acceptable.
  - If necessary, depress the ◀ button to increase the gap, or depress the ► button to decrease the gap.
- 12. Select the SET button for the right VORE open position. \_\_\_\_\_
- 13. Use the ◀◀ and ►► buttons to make sure that the VORE door moves through its full range of motion. \_\_\_\_\_
- 14. Select the DONE button on the AMC. \_\_\_\_\_
- 15. Remove straight edge from right VORE outlet on the lower BASS Module. \_\_\_\_\_
- 16. Power down the aircraft by switching the SYS BATT and START BATT to OFF, and the BUS TIE to OPEN. \_\_\_\_\_



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(c) Do a calibration of the left VORE as follows:



**Left BASS Cals  
Figure 7**

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1. On the AMC, select Tab 21. \_\_\_\_\_
  2. On the AMC, select Left BASS Cals from the drop down menu. \_\_\_\_\_
  3. Select START on the AMC Tab 21 screen. \_\_\_\_\_
- NOTE: The AMC initiates actuator control and will show the actual position of doors.
4. Command the left VORE door to closed position using the ◀◀ button. \_\_\_\_\_
    - The left VORE door moves to the closed position. \_\_\_\_\_
- NOTE: If the VORE door is cycling when not commanded to cycle select the ▶ button on the AMC until the VORE door no longer cycles.
5. Tape a straight edge in place over the left VORE outlet on the lower BASS Module. Refer to [Figure 6](#). \_\_\_\_\_



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- 6. Observe the upper edge of the left VORE door.
  - Ensure the door is not touching the seal strip. \_\_\_\_\_
- 7. If the door is touching the seal strip:
  - a. While observing the left VORE door, open the door using the ► button until space is seen between the left VORE door and the seal strip. \_\_\_\_\_
- 8. While observing the left VORE door, close the door using the ◀ button, until the door touches the seal. \_\_\_\_\_
  - Compression of the seal strip is acceptable when the upper edge of the left VORE door has compressed the seal to place the door surface flush with the uncompressed seal. A short straight edge may be used to check this.
  - If necessary, depress the ◀ button to close the door, or depress the ► button to open the door.
- 9. Select the SET button for the left VORE closed position. \_\_\_\_\_
- 10. Command the left VORE door to the open position using the ►► button (select once). \_\_\_\_\_
- 11. Check the position of the left VORE door in the open position. \_\_\_\_\_
  - A gap between the lower edge of the left VORE door and the straight edge of 0.1 +/- 0.02 (Min .098 Max 0.12) is acceptable.
  - If necessary, depress the ◀ button to increase the gap, or depress the ► button to decrease the gap.
- 12. Select the SET button for the left VORE open position. \_\_\_\_\_
- 13. Use the ◀◀ and ►► buttons to make sure that the VORE door moves through its full range of motion. \_\_\_\_\_
- 14. Select the DONE button on the AMC. \_\_\_\_\_
- 15. Remove straight edge from left VORE outlet on the lower BASS Module. \_\_\_\_\_
- 16. Power down the aircraft by switching the SYS BATT and START BATT to OFF, and the BUS TIE to OPEN. \_\_\_\_\_
- 17. Power down the AMC and remove USB to Ethernet Adapter from the copilot's armrest USB port. \_\_\_\_\_

**(5) Job Close-up**

- (a) Install Left Lower Pylon Louver Assembly - 311 KL and Right Lower Pylon Louver Assembly - 312 GR. Refer to AMM - 54-30-16-B - LOWER LOUVER PYLON SKIN - INSTALLATION. \_\_\_\_\_
- (b) 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. 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 Incorporated<br>ATTN: Customer Care<br>2503 Clark Carr Loop SE<br>Albuquerque, NM 87106 |
| Fax             | 1-505-241-8802  |
| E-mail          | customerfirstteam@eclipse.aero  |

**SERVICE BULLETIN COMPLIANCE RECORD**

**SB 500-21-004, Rev C: VORE Seal Installation**

MODEL \_\_\_\_\_ AIRPLANE S/N \_\_\_\_\_ REG. NO. \_\_\_\_\_ TOTAL TIME \_\_\_\_\_ (HOURS)

OWNER NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TELEPHONE NO. (\_\_\_\_) \_\_\_\_\_ FAX NO. (\_\_\_\_) \_\_\_\_\_

**COMPLIANCE WITH SB 500-21-004, Rev C**

**Description of Work Performed**

(Inspection | Modification | Repair | Option Installation | Defect or Damage Found, if applicable)

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DATE \_\_\_\_\_

WORK PERFORMED

BY \_\_\_\_\_ (PRINTED)

\_\_\_\_\_ (SIGNATURE)

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_