

RECOMMENDED SERVICE BULLETIN NO. DAC1-25-01 REV. 5 **SUPERSEDES DAC1-25-01 REV. 4**

I TECHNICAL DETAILS

I.1 Category

Recommended.

I.2 Airplanes Affected

Type: DA 20-C1

S/N: All equipped with EBC502 ELTs, excluding airplanes equipped with MOD 0189 (Baggage & ELT Provisions for Reverse Instrument Panel).

I.3 Date of Effectivity

16 December 2021

I.4 Time of Compliance

At owner's discretion.

I.5 Subject

EBC502 to Artex ELT upgrade.

ATA code: 25-60

I.6 Reason

This service bulletin addresses the replacement of the EBC502 ELT with the Artex ME406 ELT. As the ME406 ELT has been obsoleted, Revision 4 and subsequent revisions of this service bulletin allows for installation of the Artex ELT 1000 instead of the ME406 ELT.

I.7 Concurrent Documents

None.

I.8 Approval

Engineering data referenced or contained in this service bulletin is approved as part of the type design.

I.9 Accomplishment/Instructions

1. Remove the baggage center floor. Refer to AMM Section 25-10.
2. Ensure the ELT switch is in the OFF position.
3. Remove the existing EBC502 ELT and ELT tray.
4. Place the ELT bracket assembly (item 1) into the RH baggage tray, and position it so that the bracket assembly mounting holes are 25 mm to 27 mm aft of the existing ELT pocket. Mark the bracket location on the baggage tray. Refer to Figure 1.

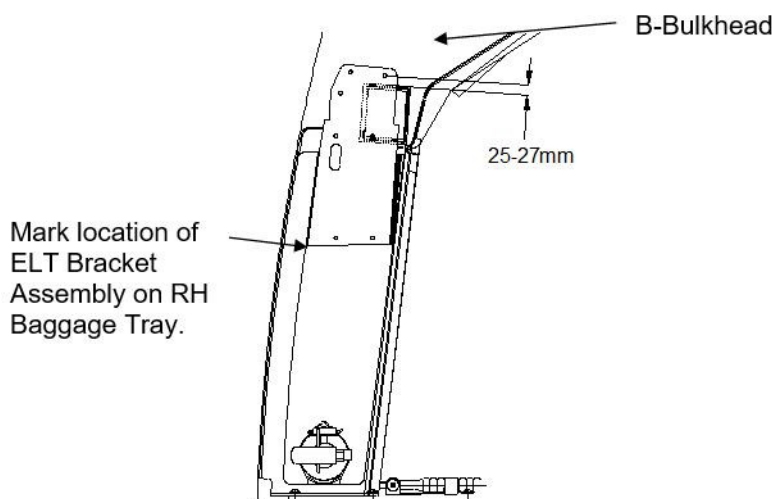


Figure 1. Location of the ELT bracket assembly.

5. Remove the ELT bracket assembly and the RH baggage tray.
6. Position the ELT bracket assembly where the baggage tray is marked. Clamp and drill out 12 rivet holes through the baggage tray.
7. Remove the bracket assembly from the baggage tray.
8. Prepare the baggage tray surface for bonding:
 - A. Sand the surface with 120 grit sandpaper.
 - B. Wipe clean with acetone and a lint-free cloth. Wipe off with another clean, lint-free cloth. Do not let the acetone dry on the surface.
9. Mix L20 resin with H91 hardener. Use a ratio of 100:27 by weight.

10. After mixing, add cotton flocks and Aerosil per the table below:

Material	Weight in Grams								
Mixed Resin	50	100	150	200	250	300	350	400	450
Cotton Flocks	5	10	15	20	25	30	35	40	45
Aerosil	1.5	3	4.5	6	7.5	9	10.5	12	13.5

11. Apply the mixed resin to all bonding surfaces. Refer to Figure 2.

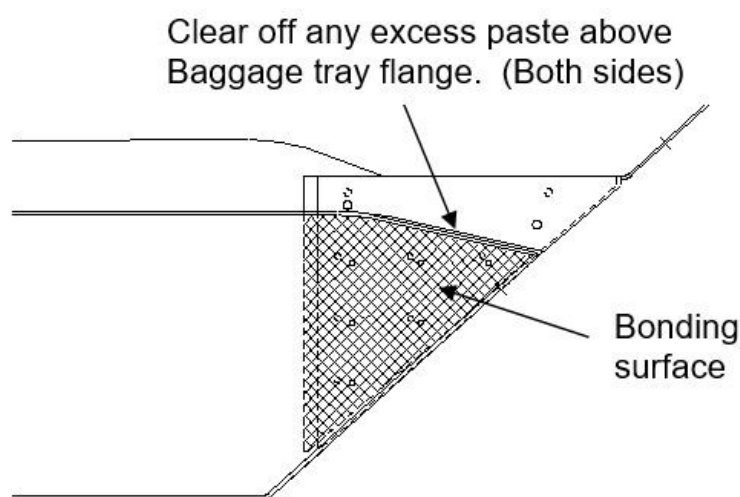


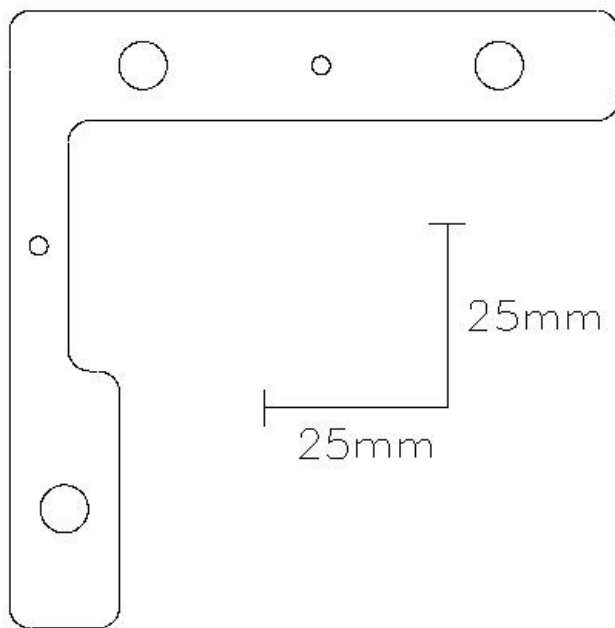
Figure 2. Bonding surface.

12. Apply mixed paste adhesive to the outer sides of the bracket assembly, and install the bracket into the baggage tray. Align the rivet holes, and use Cleco temporary fasteners to hold the bracket in place until the paste is cured.

NOTE: Cleco fasteners should be waxed or dipped in mould release compound prior to use.

13. Allow the paste to cure (approximately 2 hours).
14. Clean any excess paste.
15. Remove the Cleco fasteners and secure the bracket to the baggage tray using 12 rivets (item 16). install the rivets such that the heads protrude inside the baggage tray.
16. Install the baggage/bracket tray into the aircraft. Mark and drill mounting holes into the B-bulkhead.

17. Remove the baggage/bracket tray from the aircraft, and using the below template, drill out rivet holes on the B-bulkhead. Ensure the template is printed to scale.



18. Install the plate assembly (item 3) behind the B-bulkhead. Secure the plate assembly using two rivets (item 17).
19. Splice the Artex ELT installation kit connector (item 9) to the Artex ELT buzzer (item 7) using the splices provided (item 13). Refer to Figure 3.

NOTE: If an ELT1000 is being installed, the ELT installation kit (item 9) must be assembled in accordance with the Artex manual prior to connecting the buzzer.

- A. Connect the red wire of the piezo to pin 8 of the 15-pin D-sub connector.
- B. Connect the black wire of the piezo to pin 7 of the 15-pin D-sub connector.

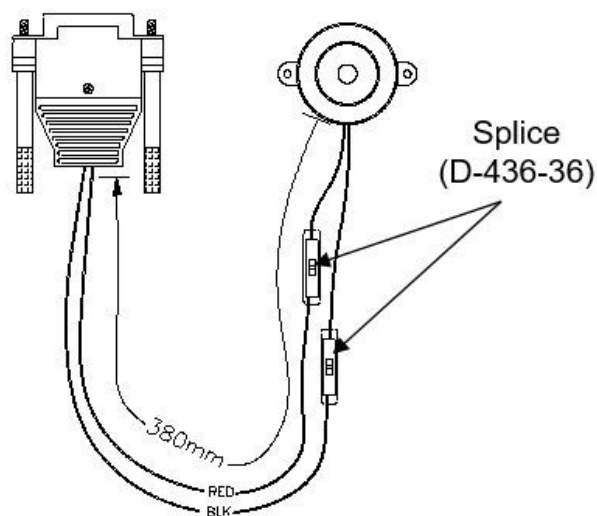


Figure 3. Splices on the interface module.

20. Route and secure the ELT coax assembly and interface module/buzzer on to the baggage/ bracket tray's cable tie bases. Refer to Figure 4.

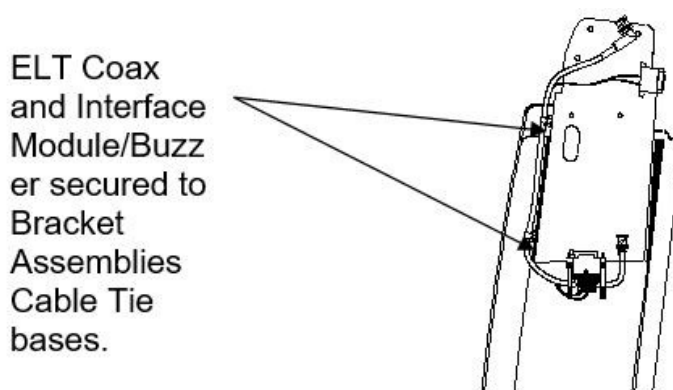


Figure 4. Installation of coax, interface module, and buzzer.

21. Install the baggage/bracket tray. Refer to Figure 5.

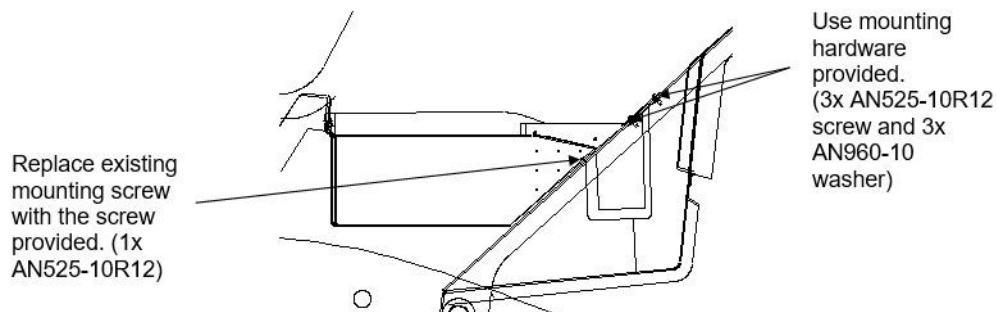


Figure 5. Installation of baggage/bracket tray. Coax and interface module/buzzer not shown.

22. Install the Artex ELT tray (item 6 or 6a) using four screws and four washers (items 11 and 12).
23. Install the ELT unit (item 5 or 5a).
24. Install the ELT side bracket (item 2) onto the ELT bracket assembly using two screws and two washers (items 11 and 12). Refer to Figure 6.
25. Install the buzzer into the side bracket hole using the provided plastic bezel nut in accordance with the Artex ME406 or Artex ELT1000 manual. Refer to Figure 7.
26. Install the antenna into the side bracket hole in accordance with the Artex ME406 or Artex ELT1000 manual. Attach the ELT coax to the ELT antenna. Refer to Figure 7.
27. Install the ELT placard (item 10) onto the ELT side bracket. Refer to Figure 6.
28. Install the baggage center panel. Refer to AMM Section 25-10.

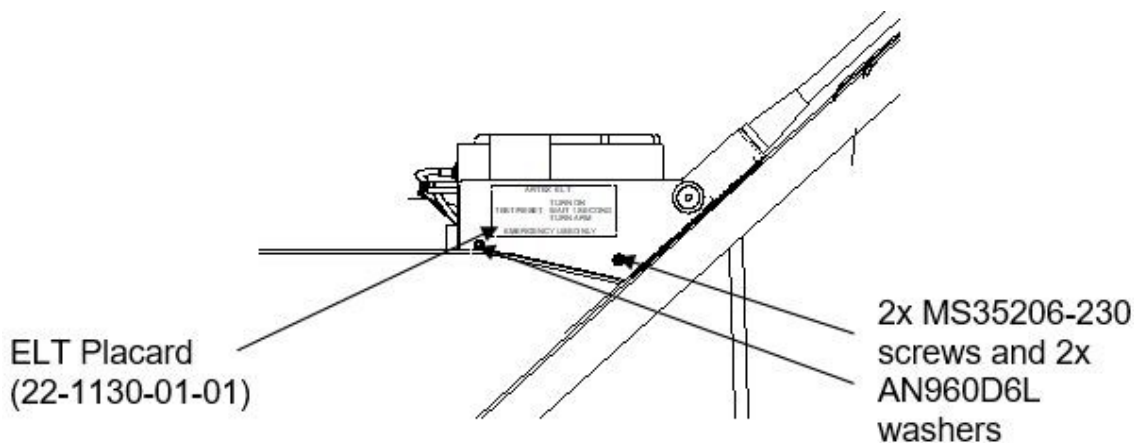


Figure 6. Installation of side bracket and ELT placard.

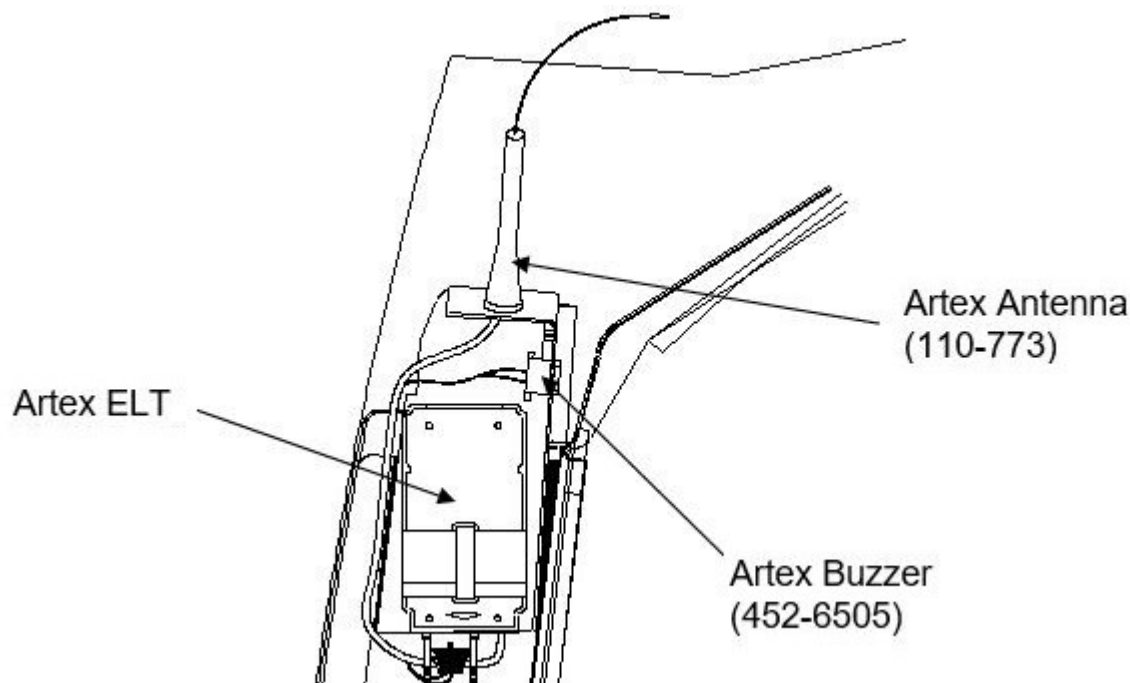


Figure 7. Installation of ELT unit, buzzer, and antenna.

29. If an Artex ME406 ELT was installed, perform an ELT transmitter test on the hour, and up to five minutes past as follows:
 - A. Tune the aircraft radio to 121.5 MHz.
 - B. Turn the ELT unit to the ON position for about one second, then back to the ARM position. Ensure the receiver voices three audio sweeps and the ELT unit (after turning it to the ARM position) displays one flash.

NOTE: If more than one flash is observed, refer to the Artex Installation Manual 570-1600.
30. If an Artex ELT 1000 was installed, perform an ELT transmitter test on the hour, and up to five minutes past as follows:
 - A. Tune the aircraft radio to 121.5 MHz.
 - B. Tap the toggle switch on the ELT towards the spring-loaded TEST position. Ensure three sweeps are heard. Ensure the LED on the ELT unit flashes.

31. Clean working areas, check for foreign objects.
32. Check all altered, replaced, repaired parts for proper function.
33. Register the ELT with the appropriate flight authority.
34. Make all necessary entries in the logbooks.
35. Submit the execution report to techpubs@diamondaircraft.com.

I.10 Mass (Weight) and CG

Make the following changes to the weight and balance:

Items Removed	Weight (kg)	Arm (m)
EBC 502 ELT	1.270	1.140

Items Added	Weight (kg)	Arm (m)
Artex ME406 ELT or ELT 1000	1.684	1.023

II PLANNING INFORMATION**II.1 Material and Availability**

Item	Quantity	Part Number	Description
1	1	22-2562-10-00	ELT bracket assembly
2	1	22-2562-20-00	ELT bracket, side
3	1	22-2562-30-00	Plate assembly
4	1	22-2562-40-00	ELT antenna cable assembly
5	1	453-6603	ME406 ELT
5a	ALT	A3-06-2749-1	Artex ELT 1000
6	1	452-3034	ME406 ELT mounting tray
6a	ALT	A3-06-2758-1	Artex ELT 1000 mounting tray
7	1	452-6505	Buzzer, ELT
8	1	110-773	Antenna, whip
9	1	455-7423	ELT installation kit connector
10	1	22-1130-01-01	Placard, ELT
11	6	AN960D6L	Washer
12	6	MS35206-230	Screw
13	2	D-436-36	Splice
14	4	AN525-10R12	Screw, washer head
15	3	AN960-10	Washer
16	12	BSPQ-43	Rivet
17	2	CCR244SS3-03	Rivet
18	A/R	L20/H91	Resin/Hardener
19	A/R	MS3367-4-9	Cable tie

II.2 Special Tools

None.

II.3 Labour Effort

Approximately 3 hours will be required to accomplish this service bulletin.

This estimate is for direct labour performed by a technician, and it does not include setup, planning, familiarization, cure time, part fabrication, or tool acquisition.

II.4 Credit

None.

II.5 Reference Documents

DA 20-C1 Aircraft Maintenance Manual (AMM), Document # DA201-C1.

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, particular that, which is not especially described in this service bulletin, must be done in accordance with the referenced maintenance manual.
3. Completion of all work must be recorded in the logbook.
4. In case of doubt, contact Diamond Aircraft Industries.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft at the address below.

Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad, London, Ontario, Canada
N5V 1S2

Customer Support:
Phone: (519) 457-4041, Fax: (519) 457-4045
E-mail: support-canada@diamondaircraft.com

Technical Publications:
E-mail: techpubs@diamondaircraft.com

**EXECUTION REPORT TO
SERVICE BULLETIN
DAC1-25-01 REV. 5**

AIRPLANE INFORMATION

Airplane Serial Number	_____
Airplane Registration	_____
Airplane Operator	_____
Hours of Operation of Airplane	_____
No. of Landings	_____
Hours of Operation of Engine	_____
Typical Operation of Airplane	_____ (private, club, training, other)

Date, Name, Signature

Please e-mail the completed form to techpubs@diamondaircraft.com.