

SERVICE BULLETIN



Service Bulletin No.: DAC1-33-02 Rev 1

Date Issued: 11 Aug 2011

Title: Installation of Replacement EL Flood Light

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- 1. ATA Code:** 3300
- 2. Effectively:** DA20-C1 aircraft serial numbers C0001 through C0508 (aircraft equipped with the Flood Light option).
- 3. General:** This Service Bulletin addresses replacing the UV250-1 flood inverter and lamp, which are no longer available, with a better Electro Luminescent (EL) Flood light inverter and lamp.
- 4. Compliance:** Compliance with this Service Bulletin is optional to the serial numbers provided above.
- 5. Approval:** Engineering data referenced or contained in this Service Bulletin is approved as part of the type design.
- 6. Labor:** Approximately 3 hours will be required to accomplish this service bulletin.

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

7. Material:	Part Number	Description	Qty
	22-3310-10-01	Flood EL Lamp	1
	1-480305-0	Connector	1
	60618-1	Contacts	2
	EMS-A-CO	Base, Cable Tie	1
	MS3367-4-9	Cable Tie	1
	RNF100-3-8-BK	Heat shrink, Black	30mm
	PS-250-2WT-2	Label (P3370-09)	1
	APVL314-4-1-L-5QF	Inverter, Flood	1
	22-3910-95-00	Composite, Flood Lamp Bracket	1
	825-350	Channel, Extruded	1.7m
	MS35206-230	Screw, Machine, Pan head	2
	MS20365-632	Nut, Self locking	2
	AN960D6L	Washer, Plain	4
	L160	Resin	A/R
	L20	Resin, Alternate Part (For use with H91 only)	A/R
	H163	Hardener	A/R
	H91	Hardener, Alternate Part (For use with L20 only)	A/R

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The above material may be ordered as kit DAC1-33-02AMK0
The dry paste kit may be ordered as a kit DA20CPK

8. Special Tools: N/A

9. References: DA20-C1 Aircraft Maintenance Manual, Document Number DA201-C1.

10. Accomplishment Instructions:

- 10.1** Disconnect the aircraft battery as per ATA chapter 24-31-00 of the Aircraft Maintenance Manual (AMM).
- 10.2** Remove the instrument panel cover as per ATA chapter 25-10-00 of the AMM.
- 10.3** Pull the Battery circuit breaker located on the right side of the instrument panel.
- 10.4** Remove existing extruded rubber channel around edge of instrument panel cover.
- 10.5** Remove UV250-1 flood strip from Instrument panel cover.
- 10.6** Cover the flood lamp attaching screw holes on the top surface of the instrument panel cover using masking tape; this will ease the clean up process later.

WARNING: USE CAUTION WHEN HANDLING AND MIXING RESIN AND HARDENER, WEAR GLOVES AND WORK IN A WELL VENTILATED AREA.

- 10.7** Prepare surface for bonding; sand bonding surfaces with 120 grade sand paper. Remove all paint from bonding surfaces.

NOTE: Do not damage composite layers

- 10.8** Wipe clean with isopropyl alcohol.

NOTE: Do not allow isopropyl alcohol to dry on surface, wipe dry.

- 10.9** Remove peel ply from composite flood lamp bracket.
- 10.10** Mix resin (reference NOTES located under Table 1), wet all bonding surfaces with mixed resin prior to paste application.
- 10.11** Mix paste as per Table 1. Apply paste to fill flood lamp attaching screw holes.
- 10.12** Apply paste to bonding surface on flood lamp bracket.
- 10.13** Bond bracket onto Instrument panel cover (See Figure 1).

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10.14 Clean excess paste and ensure that flood lamp groove is free of paste.

10.15 Cure and post-cure. Pre-curing temperature: 20-25 °C (68-77 °F), Time: 24 hours. Post-curing temperature: 60 °C (140 °F), Time: 15 hours

Note: If L20 and H91 resin used, post-cure 4 hours at 60 °C.

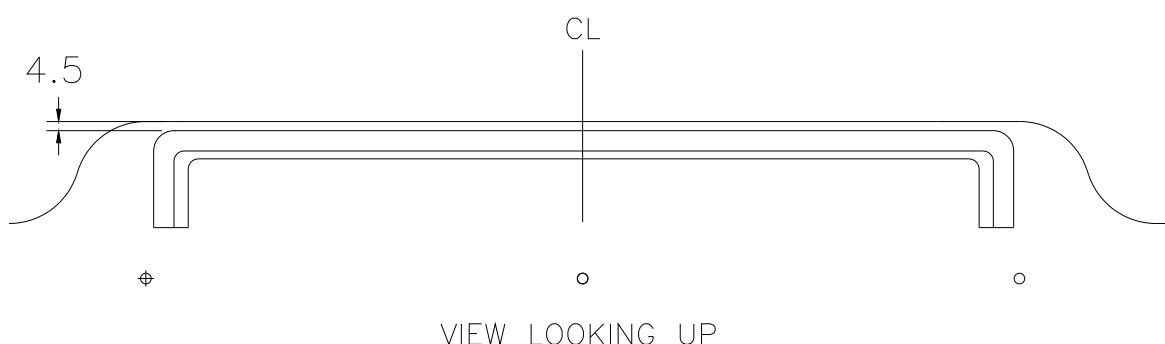


Figure 1: Installation of Bracket to the Instrument Panel Cover

Table: 1 – Mixed Resin Composition by Weight

Mixed Resin Weight (g)	100	200	300	400	500
Cotton Flox (g)	11.5	23.0	34.5	46.0	57.4
Aerosil (g)	2.8	5.5	8.3	11.1	13.8
Microballoons (g)	2.3	4.7	7.0	9.4	11.7

NOTE: 1) Resin L160 (100 parts by weight) Hardener H163 (28 parts by weight)

2) DA20-C1 aircraft serial numbers C0186 through C0199 use Resin L285 (100 parts by weight), Hardener H286 (40 parts by weight)

3) Alternate, L20 (100 parts by weight) and H91 (27 parts by weight).

10.16 Paint filled holes, and bonded bracket, black. Allow time for paint to set before proceeding.

10.17 Bond new extruded channel along edge of Instrument panel cover using Loctite 495 or equivalent. Trim excess extruded channel off.

10.18 Remove clear backing from new flood lamp (22-3310-10-01) exposing adhesive side. Gently slide into newly bonded bracket groove.

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- 10.19 Press fit Flood lamp to instrument panel cover.
- 10.20 Install contacts, connector, label and heat shrink as shown in Figure 2.
- 10.21 Bond Cable Tie base to underside of Instrument panel cover using DP110 adhesive, or equivalent. Secure with cable tie. See Figure 2 for approximate bonding location.
- 10.22 Remove UV250-1 flood inverter from left side of instrument panel.
- 10.23 Drill holes for new flood inverter per template provided and clean all debris before continuing to the next step.
NOTE: Make sure the Instrument panel harness is clear of new inverter hole locations prior to drilling.
- 10.24 Install new flood inverter with hardware provided into the new inverter location.
- 10.25 Connect flood inverter connector J3370-1 to instrument panel harness connector P3370-1 and connect the ground wire (black wire) to ground stud location #18. Safely secure using acceptable aircraft practices.

NOTE: Connector J3370-09 is for the Flood lamp.

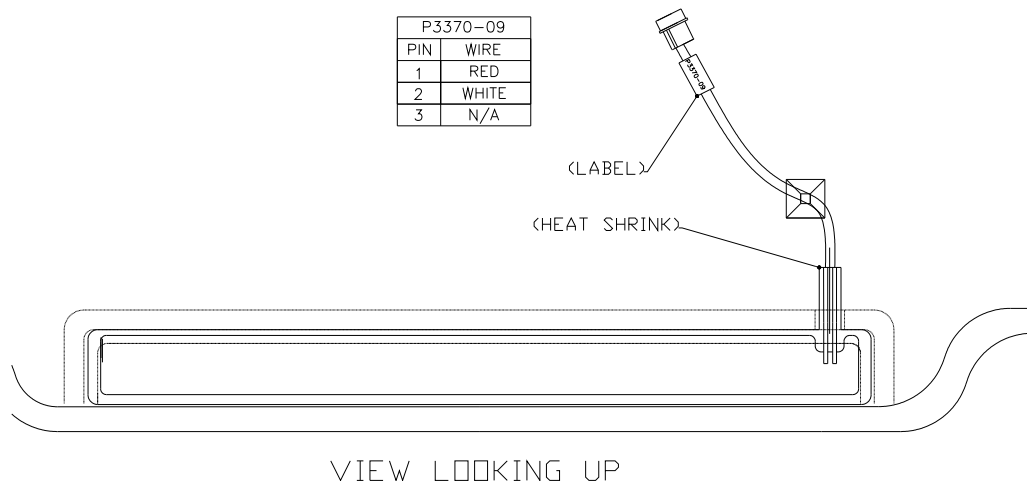


Figure 2: Installation of Replacement EL Flood light

- 10.26 Clean the work area and inspect for foreign objects.
- 10.27 Install the instrument panel cover as per ATA chapter 25-10-00 of the Aircraft Maintenance Manual.

NOTE: Make sure to plug in the flood lamp connector.

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10.28 Connect the aircraft battery as per ATA chapter 24-31-00 of the Aircraft Maintenance Manual.

10.29 Perform a function check of the flood light system as follows:

10.29.1 Push in Battery circuit breaker and turn on Electrical Master switch.

10.29.2 Turn flood switch ON and continue to adjust clockwise. Ensure that the flood lamp turns on, and continues to get brighter.

10.30 Remove aircraft power and make a log book entry that this Service Bulletin has been incorporated.

11. Weight and Balance: The effect on Weight and Balance is Negligible.

12. Availability: Contact Diamond Aircraft Industries Inc.

13. Electrical Load Data: No impact to the electrical load.

14. Credit: None

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TEMPLATE

(Scale 1:1)

(LOOKING DOWN)

