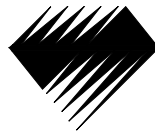


SERVICE BULLETIN



Diamond
AIRCRAFT

Service Bulletin No.: DA20-33-01, Rev. 0

Date Issued: June 29, 1995

Title: Night VFR

Page: 1 of 4

1. **ATA Code:** 3310
2. **Effectivity:** DA 20-A1, Serial numbers 10002 through 10020 (all accomplishment instructions applicable).
DA 20-A1, Serial numbers 10021 and subsequent (Limitation Placard accomplishment instruction applicable only).
3. **General:** This bulletin describes the retrofit of a cockpit night lighting system to permit Night VFR operation.
4. **Compliance:** Optional
5. **Approval:** Engineering data referenced or contained in this bulletin is Transport Canada approved.
6. **Labor:** 30 man-hours
7. **Material:** Material may be ordered as kit MK20-33-01
8. **Special Tools:** Locating jig for rocker switches (included with parts).
9. **References:** Maintenance Manual DA 20 Katana

10. Accomplishment Instructions

Fuselage Installation:

- 10.1 Remove seat cushions.
- 10.2 Remove seat pans (Ref. Maintenance Manual Chapter 25-10).
- 10.3 Remove Fire Extinguisher and Baggage shelves.
- 10.4 Remove Instrument panel cover (Ref. Maintenance Manual Chapter 25-10).
- 10.5 Remove Control Quadrant to gain access to the harness which runs through the center console.
- 10.6 Using the location jig, drill and route out the mounting holes for the two rocker switches in the center console as shown on figure 1.
- 10.7 Route the fuselage harness from the rear of the instrument panel down along the existing harness, which runs through the center console on the right side of the fuselage, to the bottom of the spar bridge.
- 10.8 Pass the switch wires through their respective holes and connect them to the switches in accordance with figures 1 and 2.
- 10.9 Feed lighting wires through existing conduit up to audio jacks, then through new conduit supplied, using a fish wire.

SERVICE BULLETIN



Diamond
AIRCRAFT

Service Bulletin No.: DA20-33-01, Rev. 0

Date Issued: June 29, 1995

Title: Night VFR

Page: 2 of 4

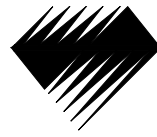
Accomplishment Instructions (cont'd from page 1)

- 10.10 Attach connectors supplied to lighting wires, refer to figure 2.
- 10.11 Run conduit along RH inside edge of fuselage roll bar lip to top center position. Hold in place with adhesive DP-110.
- 10.12 Connect wires to light fixture in accordance with figure 2.
- 10.13 Adjust night lighting assembly until it fits snugly beneath roll bar and center it with respect to center line. Drill two holes in roll bar using pre drilled holes in lighting assembly as a template, and countersink 100 degrees (ref. figure 1). Secure unit with MS24693-C27xxNom screws and N277 cap nuts, making sure that the screws are sealed with silicon sealant.

Instrument Panel Installation:

- 10.14 Remove all items mounted to instrument panel and control cable pedestal.
- 10.15 Remove labels and drill holes in instrument panel for fuel valve LED, trim DIM/BRIGHT switch and dimmer rheostat in accordance with figures 3A and 3B.
Note: Trim DIM/BRIGHT hole locations differ for differing serial numbers.
- 10.16 Route instrument panel harness through rear of instrument panel following existing harness.
- 10.17 Replace existing trim indicator with new trim indicator and DIM/BRIGHT switch and connect dimmer rheostat and LED pigtail assembly in accordance with figure 2.
- 10.18 Continue with operation if flap switch is S/N 200 or above; however, if flap switch is S/N 199 or below, replace with new switch before continuing and return old switch to Diamond Aircraft. For difference between switches, see figure 7.
- 10.19 Remove flap position label to expose potentiometer adjustment and turn fully clockwise. Replace label.
- 10.20 Remove the flap connector P2750-01. Remove pin 'M' and cut the jumper wire that goes to pin 'H' close to the pin. Reinsert pin 'M'. (figure 2).
- 10.21 Remove pin 'H' and discard the pin with the short jumper wire attached.
- 10.22 Insert pin 'H' with wire 27511A22, supplied, and route to the trim DIM/BRIGHT switch. Solder wire in place. (figure 2)
- 10.23 Change internal light breaker from 7.5 amps to 1 amp. Map light power supply is protected by taxi light breaker.
- 10.24 Prepare instrument panel and panel support for painting. Paint with BASF flat, dark grey paint #93924.
- 10.25 Reinstall all items on instrument panel and pedestal in original positions with the exception of the Manifold pressure and Tachometer. Install Tachometer in outboard location and Manifold pressure in inboard location (Ref. figure 5).
- 10.26 Recess OAT indicator by removing indicator and probe through front of instrument panel then reinstalling it from the rear. Insert OAT spacer block between indicator and rear of I-panel and secure with original screws in addition to brass screws supplied, refer to figure 4.

SERVICE BULLETIN



Diamond
AIRCRAFT

Service Bulletin No.: DA20-33-01, Rev. 0

Date Issued: June 29, 1995

Title: Night VFR

Page: 3 of 4

Accomplishment Instructions (cont'd from page 2)

- 10.27 Locate Inst/Map light ON/OFF label on console near switch and locate remaining labels in accordance with figure 5.
- 10.28 Reinstall instrument panel cover, taking care not to damage dimmer rheostat with screw.

Limitation Placards:

- 10.29 Replace existing placard (upper left of instrument panel) with new placard illustrated below.

This airplane is classified as a very light airplane approved for VFR only in non-icing conditions. All aerobatic manoeuvres, except for intentional spinning which is permitted with flaps UP only, are prohibited. See Flight Manual for other limitations.

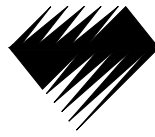
System Test:

- 10.30 Cover canopy with a dark coloured tarp or test in the dark.
- 10.31 Turn on aircraft power.
- 10.32 Engage internal light breaker and taxi light breaker.
- 10.33 Turn on instrument light switch, two outside lights on Inst/Map light assembly and red LED under instrument panel should come on.
- 10.34 Turn dimmer rheostat fully clockwise. Lights should be on full bright.
- 10.35 Varying dimmer rheostat should vary light intensity.
- 10.36 Disengage internal light breaker, lights should go out.
- 10.37 Turn on map light. Center light on Inst/Map light assembly should come on.
- 10.38 Disengage taxi light breaker. Map light should go out.

System Set Up:

- 10.39 Engage internal light breaker and taxi light breaker.
- 10.40 Turn on instrument light switch.
- 10.41 Cover one of the outside lights on the Inst/Map light assembly and rotate the other so the light intensity is focused on the opposite side of the Instrument panel.
Note: The beam will illuminate the entire Instrument panel.
- 10.42 Repeat the process for the remaining outside light.
- 10.43 Turn instrument light off and turn map light on.
- 10.44 Rotate Map light until intensity is focused on the bottom center of the Instrument panel.
Note: The map light alone can illuminate the entire Instrument panel.

SERVICE BULLETIN



Diamond
AIRCRAFT

Service Bulletin No.: DA20-33-01, Rev. 0

Date Issued: June 29, 1995

Title: Night VFR

Page: 4 of 4

11. Weight and Balance: Negligible

12. Electrical Load Data: 0.17 amps

13. Credit: Parts supplied at no charge. Labour credit issued upon receipt of a completed warranty application form.

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter.

Diamond Aircraft Industries Inc. 690 Crumlin Sideroad, London, Ontario, Canada N5V 1S2
Phone: (519) 457-4000 Fax: (519) 457-4037

COPYRIGHT 1995