

OPTIONAL SERVICE BULLETIN NO. DAC1-33-06 REV. 3

SUPERSEDES DAC1-33-06 REV. 2

I TECHNICAL DETAILS

I.1 Category

Optional.

I.2 Airplanes Affected

Type: DA 20-C1

Serial Numbers: C0001 to C0647

I.3 Time of Compliance

At owner's discretion.

I.4 Subject

ATA code: 3340.

I.5 Reason

This service bulletin addresses the replacement of Whelen's anti-collision/position light assembly (A600PG-14/A600PR-14) with the installation of Whelen's LED anti-collision/position light assemblies in the DA 20-C1.

I.6 Approval

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

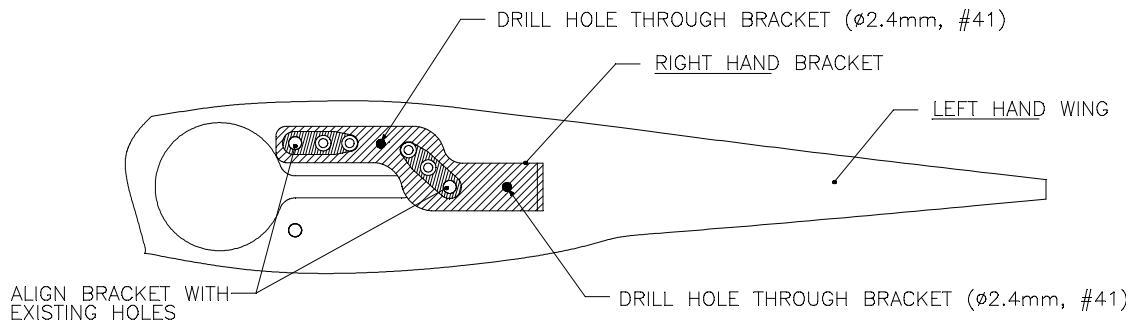
I.7 Accomplishments/Instructions

1. Disconnect the aircraft battery as per DA 20-C1 AMM Chapter 24-31-00.
2. Pull the battery circuit breaker located on the right side of the instrument panel.

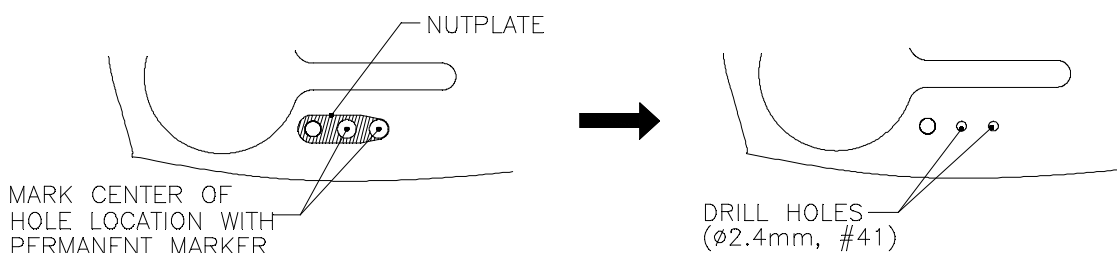
Wingtip:

3. Remove the existing left hand and right hand wingtip ACL/Position light assembly per DA20-C1 AMM Chapter 33-40-00.
4. Use the right hand LED bracket (item 5) as a template over the left hand wingtip holes. Mark the rivet locations with a permanent marker, and drill.

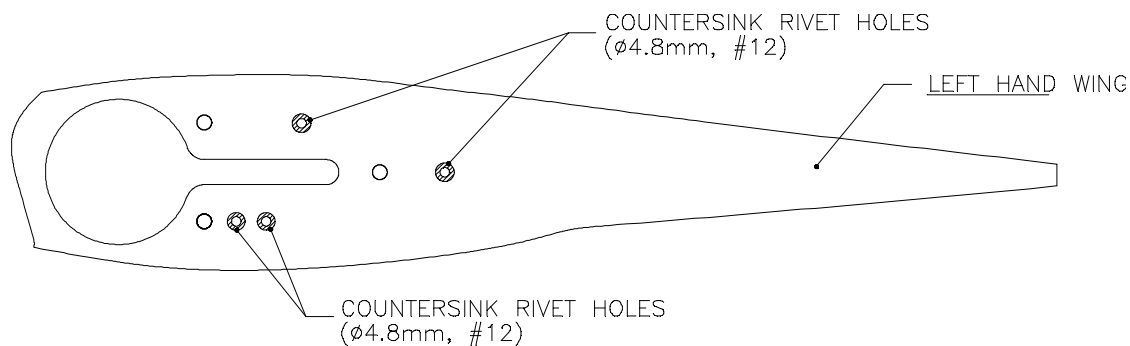
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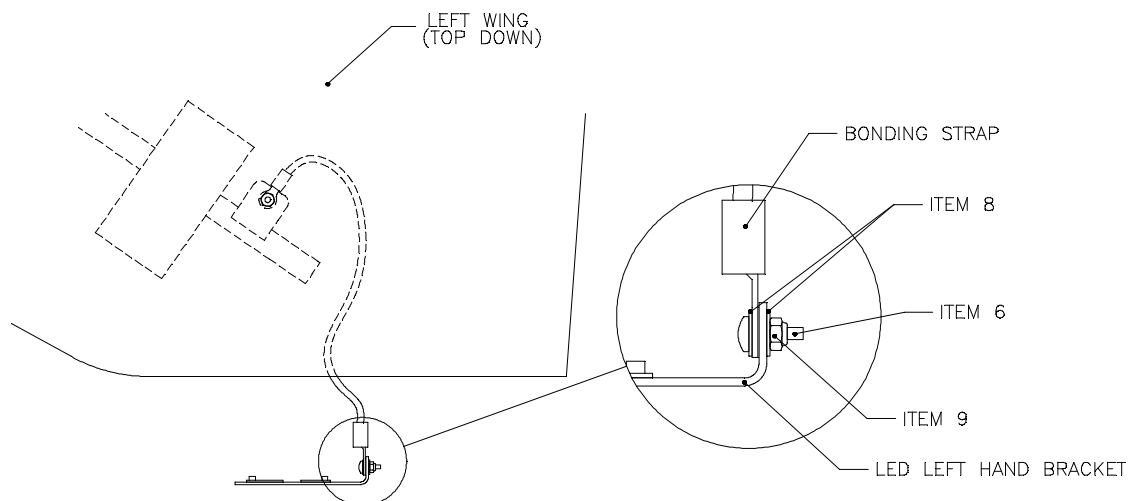
5. Align nut plate (item 12) on left hand wing as shown, and mark the rivet locations with a permanent marker. Remove nut plate, and drill.



6. Counter sink new rivet holes as shown below.



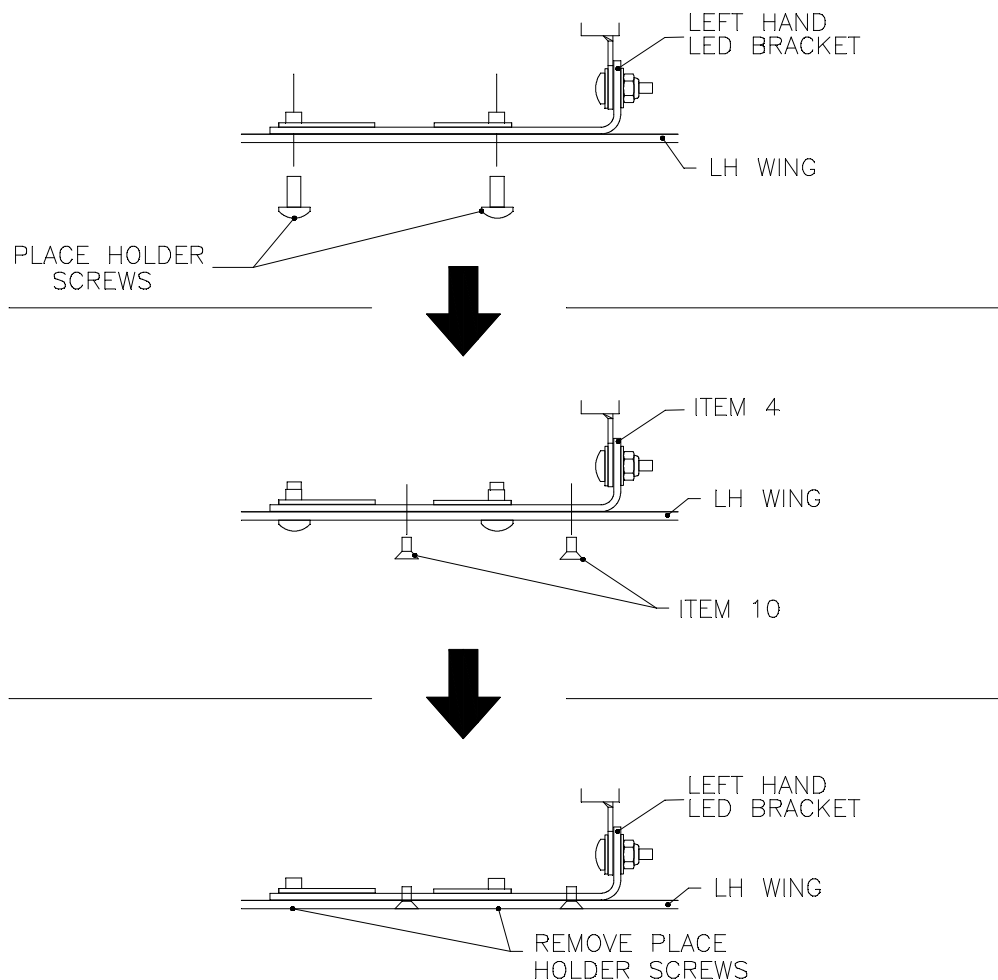
7. Repeat steps 4 through 6 with the left hand LED bracket (item 4) on the right hand wing.
8. On the left wing, secure bonding strap attached to wing conduit onto left hand LED bracket using supplied hardware.



9. Apply surface protection (Nycote 7-11 or equivalent) to bonding connection.

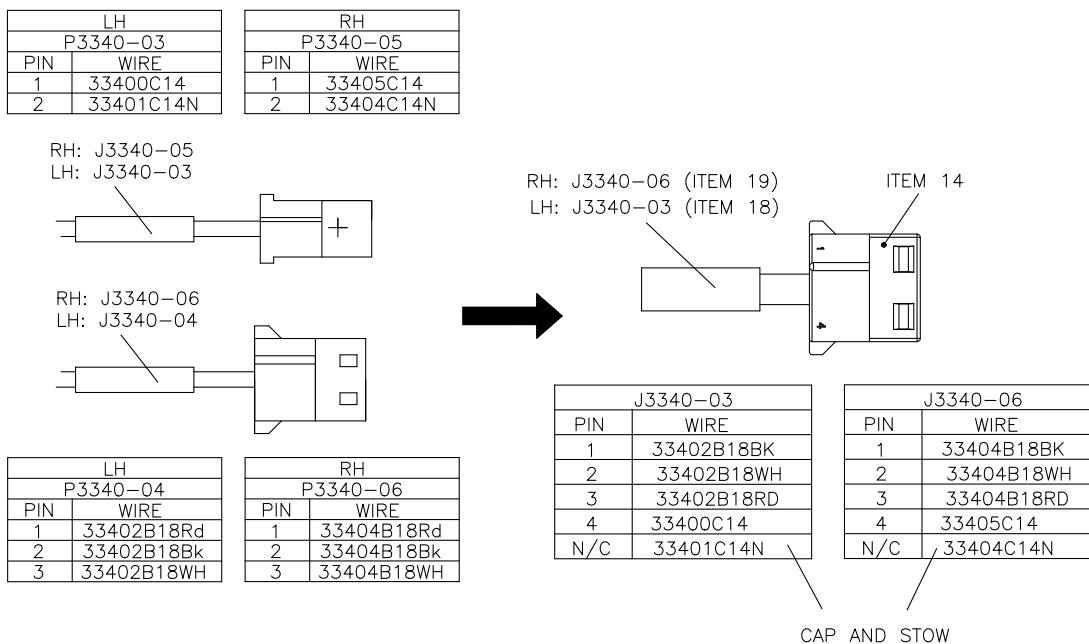
NOTE: Nycote 7-11 not supplied in kit.

10. Install left hand LED bracket (item 4) inside left hand wing as shown below, and temporarily fasten with place holder screws (item 7). Rivet bracket as shown using item 10, and remove place holder screws.

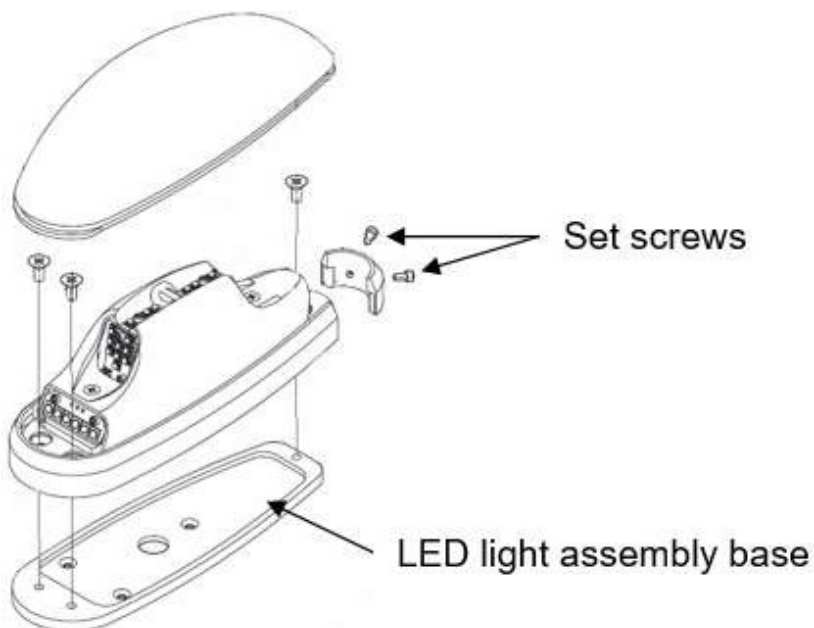


11. Similarly, rivet nut plate (item 12) inside left hand wingtip at location drilled in step 5.
12. Rework left hand ACL/Position light connectors into new single connector (item 14) with new label (LH: item 18; RH: item 19) as shown below. Cap and stow unused ground wire with heat shrink (item 15).

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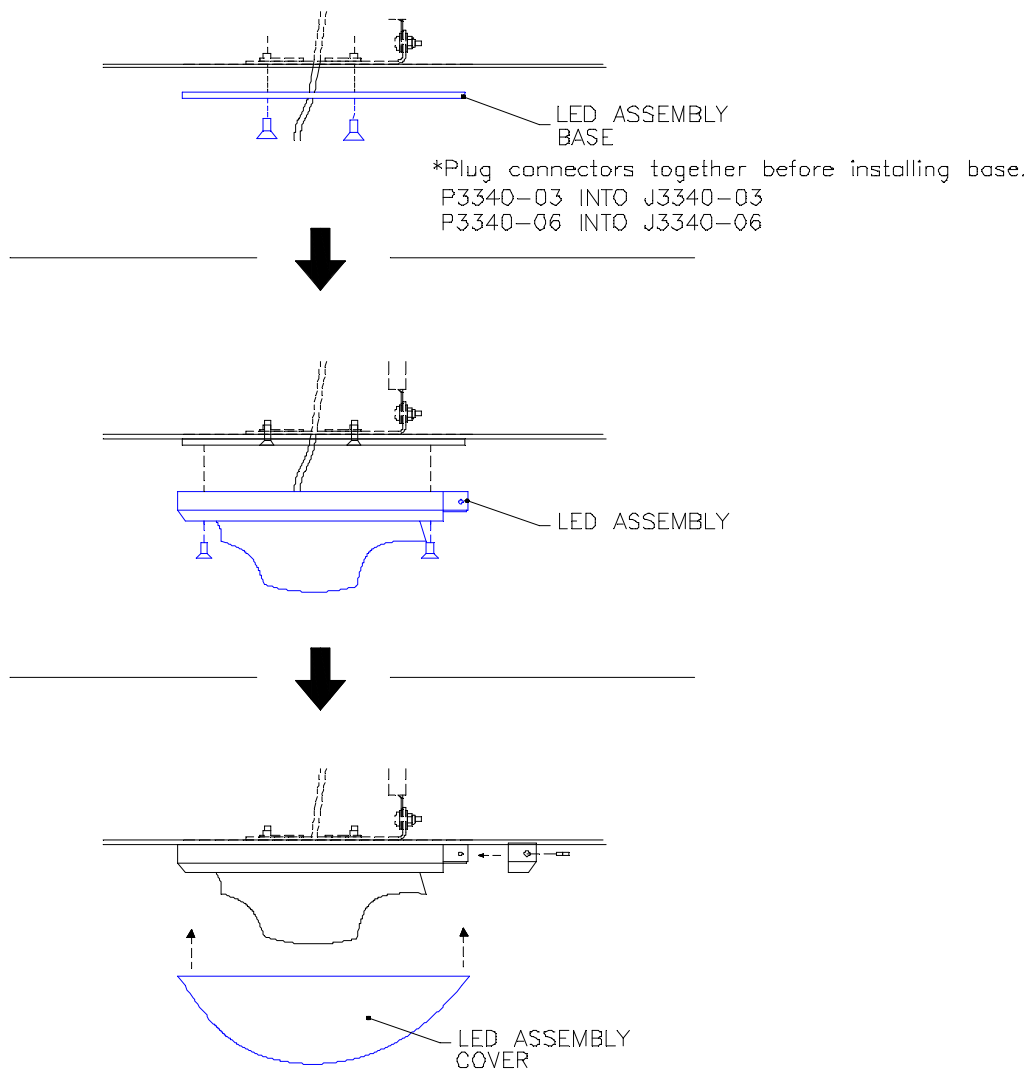


13. Remove set screws from LED light assembly.



14. Install left hand LED light assembly (item 2) as shown below in the left hand wing.

NOTE: verify prior to installation that the LED light assembly is labeled with “LH.”



15. Apply fillet of sealant (Marine 4000 or equivalent) around edge of LED light assembly and left hand wing.

NOTE: do not cover light assembly drain hole when applying sealant.

NOTE: sealant not supplied with parts kit.

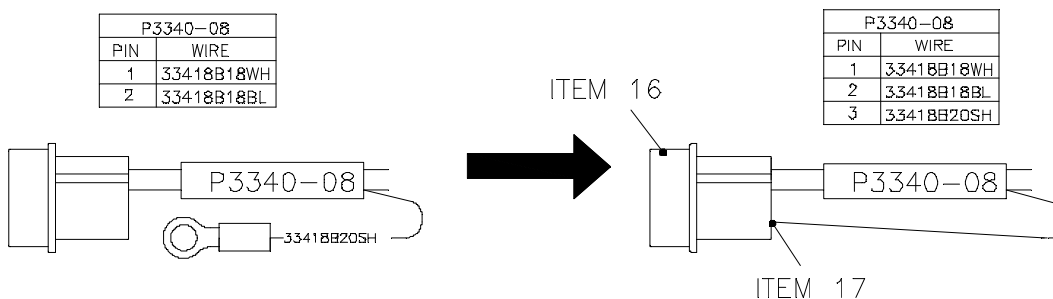
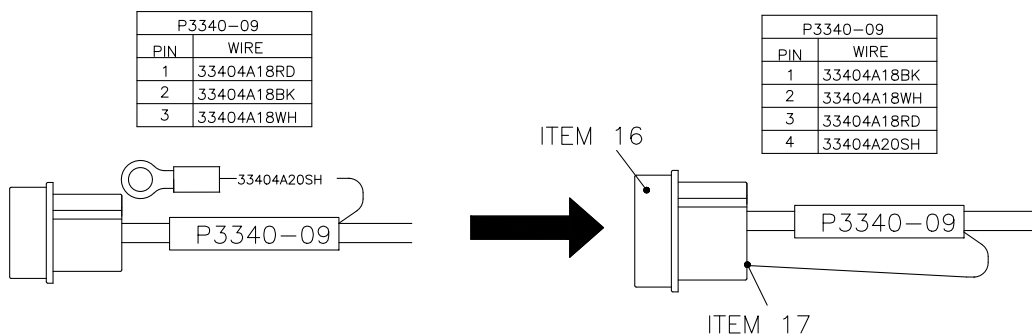
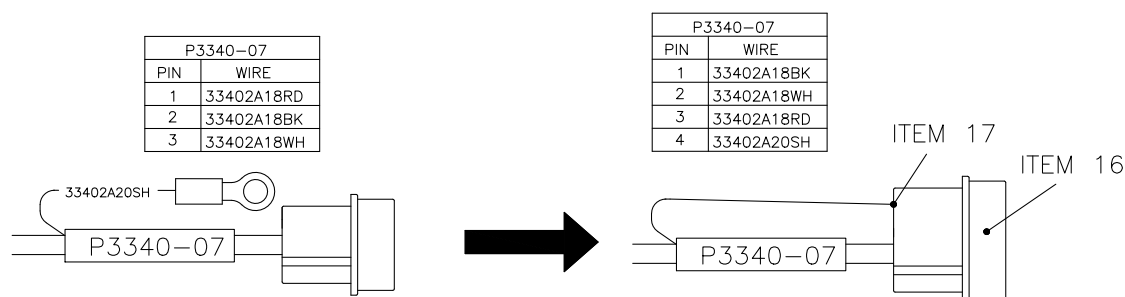
16. Repeat steps 8 through 15 on the right wing (RH LED bracket item 5, RH LED assembly item 3).

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Under Pilot's Seat:

17. Remove pilot's seat as per DA 20-C1 AMM Chapter 25-10-00.
18. Remove the wingtip light power unit located under pilot's seat per DA 20-C1 AMM Chapter 33-40-00.
19. Rework the power unit fuselage connectors as shown below (P3340-07, P3340-08, P3340-09), crimping the supplied crimp onto the shield wire and terminating as shown below.



20. Install LED light adapter harness (item 1) in line with the existing modified fuselage harness connecting the appropriate labelled adapter harness connector to its equivalent in the fuselage.

Adapter Connector	Fuselage Connector
P3340-07	J3340-07
P3340-08	J3340-08
P3340-09	J3340-09

21. Secure harness using cable ties (item 13).
22. Clean the work area, and inspect for foreign objects.
23. Install pilot's seat per DA 20-C1 AMM Chapter 25-10-00.
24. Connect the aircraft battery as per DA 20-C1 AMM Chapter 24-31-00.
25. Carry out a function check of the LED ACL/Position light system.
- 25.1. Push in battery circuit breaker, and turn on Electrical Master switch.
- 25.2. Turn STROBE rocker switch to the ON position, and verify proper operation of ACL lights.
- CAUTION:** do not look directly at strobe lights during operation.
- 25.3 Turn STROBE rocker switch to OFF position, and turn POSITION rocker switch to ON position. Verify proper operation of position lights.
26. Power down, and make a logbook entry that this service bulletin has been incorporated.

I.8 Mass (Weight) and CG

Make the following adjustments to weight and balance.

The following items are removed:

Item	Weight lbs (kg)	Arm in (m)
ACL/Position Assembly (Both LH/RH)	-0.6 (-0.27)	20 (0.51)
Strobe Power Supply	-2.1 (-0.95)	6.4 (0.16)

The following item is added:

Item	Weight lbs (kg)	Arm in (m)
LED ACL/Position Assembly (Both LH/RH)	+0.47 (+0.21)	20 (0.51)

I.9 Electrical Load Data

Item	System	Load (A)
ACL/Position Assembly (Both LH/RH)	Position	-7.0
	ACL	-4.0
LED ACL/Position Assembly (Both LH/RH)	Position	+0.96
	ACL	+2.0

II PLANNING INFORMATION

II.1 Material and Availability

The required parts may be ordered under kit **DAC1-33-06AMK1**.

II.2 Special Tools

n. a.

II.3 Labour Effort

Approximately 4 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.

II.4 Credit

n. a.

II.5 Reference Documents

DA 20-C1 Aircraft Maintenance Manual, document # DA201-C1.

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. Completion of all work must be recorded in the logbook.
3. In case of doubt, contact Diamond Aircraft Industries.