

# SERVICE BULLETIN



**Service Bulletin No.: DAC1-74-02**

**Date Issued: February 18, 2000**

**Title: Starting Vibrator Battery Installation**

**Page: 1 of 6**

- 1. ATA Code:** 7410
- 2. Effectivity:** DA20-C1 s/n C0001 up to and including C0102.
- 3. General:** This service bulletin addresses the installation of a battery for the operation of the magneto-starting vibrator. The battery is used to supply power to the magneto-starting vibrator during engine start only.
- 4. Compliance:** Compliance with this service bulletin is recommended.
- 5. Approval:** The engineering data referenced or contained in this service bulletin is approved as part of the type design.
- 6. Labour:** Approximately 2 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.*

<b>7. Material:</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
	22-7432-30-00	Harness, Vibrator Battery	1
	22-7432-00-01	Bracket, Vibrator Battery	1
	22-7432-00-03	Rubber pad, Vibrator Battery	1
	22-7432-10-00	Clamp, Vibrator Battery	1
	LC-R121R3PU	Vibrator Battery, Panasonic	1
	SSD42SSBS	Pop Rivet, Battery Bracket	4
	MS3367-5-9	Cable tie, Harness	8

The above material may be ordered as a kit DAC1-74-02-AMK0.

**8. Special Tools:** #30 drill bit

Rivet Puller

**9. References:** DA20 Maintenance Manual (MM) Document number DA201-C1.

**10. Accomplishment Instructions:**

- 10.1** Remove both upper and lower cowlings
- 10.2** Remove instrument panel cover to gain access to the cable clamp hardware.
- 10.3** Disassemble cable clamps in three places as shown in figure 1. Note the location of the avionics cooler hose clamp on the aft side of the firewall.
- 10.4** Remove and discard tie-wraps along the wire bundle from the firewall middle fuse holder to the starting vibrator as shown in figure 1.
- 10.5** Disassemble fuse holder. Remove wire marked 74308A16 from bundle. Unplug wire at BAT location on vibrator. Cut shielding ground wire at splice on wire 74300A16 and discard.
- 10.6** Locate battery bracket as shown in Figure 2. Mark holes to be drilled using the bracket as the template. Ensure that the large end of the bracket faces aft.

# SERVICE BULLETIN



Service Bulletin No.: DAC1-74-02

Date Issued: February 18, 2000

Title: Starting Vibrator Battery Installation

Page: 2 of 6

- 
- 10.7** Drill four #30 (3.3mm) holes through firewall in locations marked in 10.6.
- 10.8** Rivet the battery bracket, complete with the clamp, to the firewall as follows. Observe that the bracket large end faces aft, the gear portion of the clamp is positioned on the outboard side of the battery facing up see figure 2, and that the clamp is centered in notches on bracket.
- 10.9** Position the rubber pad on the bracket. Install the battery with the terminals towards the front (figure 2), tighten battery clamp.
- 10.10** Install fuse and attach fuse cap from new harness to the existing fuse holder. Route the wires along bundle to the starting vibrator and new battery location. Route wires to the starting vibrator battery under the instrument vacuum hose as shown in figure 1.
- 10.11** Connect the two grounding ring terminals on the new harness to the vibrator mounting bracket at the same location as the existing ground. There should be 3 connections here.
- 10.12** Plug harness into the starting vibrator at location marked BAT see figure 1
- 10.13** Install the previously removed cable clamps. Install new cable ties as required as shown in Figure 1 to secure the wire bundle to the firewall.
- 10.14** Plug harness wire marked **BATTERY POSITIVE** into the terminal marked + on the battery.  
Plug harness wire marked **BATTERY NEGATIVE** into the terminal marked – on the battery.
- 10.15** Refer to figure 3 for an electrical schematic of the installation.
- 10.16** Testing Procedure
- 10.16.1** Disconnect wire harness from previously installed fuse holder.
- 10.16.2** Disconnect and isolate engine starter cable from starter.
- 10.16.3** Set aircraft **BAT** master switch to ON.
- 10.16.4** Turn key to start position the vibrator should be heard.
- 10.16.5** Set **BAT** master switch to OFF.
- 10.16.6** Assemble fuse holder and connect starter cable.
- 10.17** Install instrument panel cover and cowlings.
- 10.18** Make log book entries to state that this service bulletin has been accomplished.

# SERVICE BULLETIN



**Service Bulletin No.: DAC1-74-02**

**Date Issued: February 18, 2000**

**Title: Starting Vibrator Battery Installation**

**Page: 3 of 6**

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**11. Weight and Balance:** The battery with bracket adds 1.25lbs(.6kg) of weight at -31.5in (-80cm) moment arm.

**11. Credit Terms and Conditions:**

**Labour** -A labour credit of 2 hours will be issued upon receipt of a completed Customer Claim Form when received within 30 days from the issue date of this service bulletin.

**Parts** -Parts supplied at no charge.

*To obtain satisfactory results, procedures specified in this Service Bulletin 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 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 Industries Inc., at the address below.*

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# SERVICE BULLETIN



Service Bulletin No.: DAC1-74-02

Date Issued: February 18, 2000

Title: Starting Vibrator Battery Installation

Page: 4 of 6

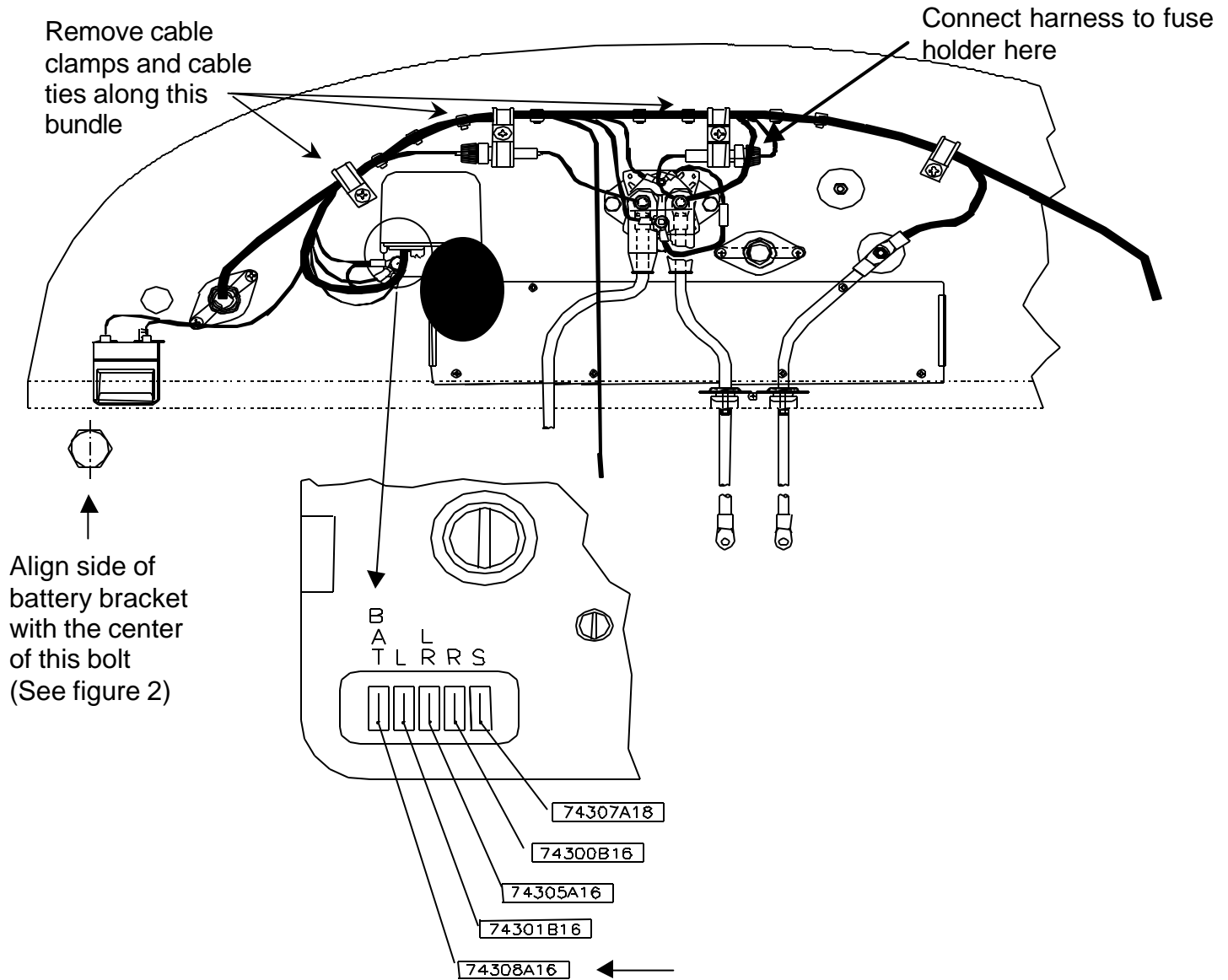


Figure 1  
Looking Aft

# SERVICE BULLETIN

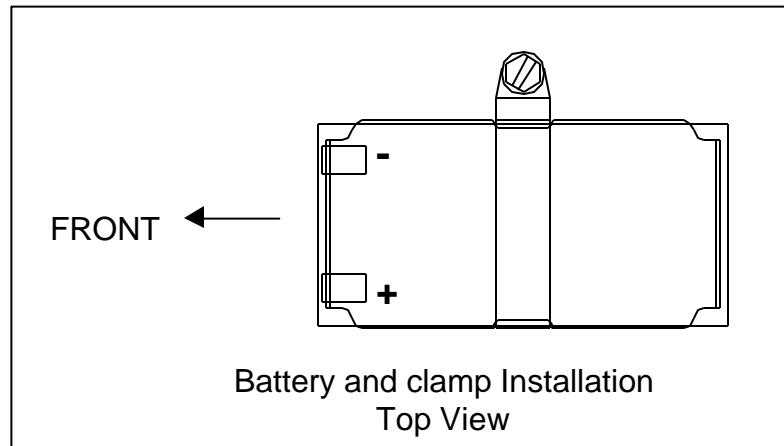


Service Bulletin No.: DAC1-74-02

Date Issued: February 18, 2000

Title: Starting Vibrator Battery Installation

Page: 5 of 6



Line up bracket with  
centerline of existing  
bolt on firewall front

Drill #30(3.3mm)  
4 places

32 mm from front  
of firewall

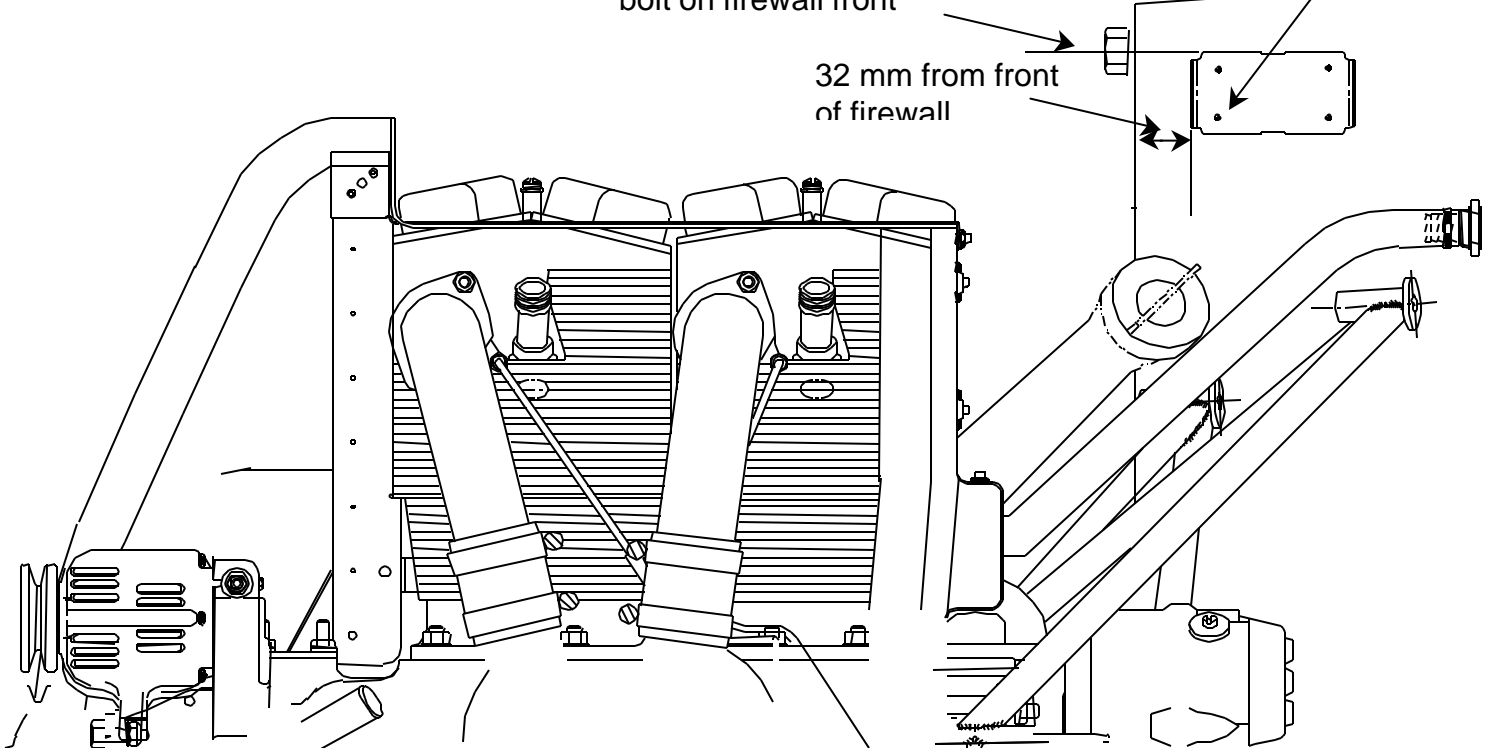


Figure 2



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**Date Issued: February 18, 2000**

Page: 6 of 6

