

SERVICE BULLETIN



Service Bulletin No.: DA20-24-04 Rev 0

Date Issued: 08 Nov. 2012

Title: Replacement of Battery Relay Contactor

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1. **ATA Code:** 2430
2. **Effectivity:** All DA20-A1 aircraft.
3. **General:** This Service Bulletin addresses the installation of the LAMAR relay contactor for the battery relay in the DA20-A1.
4. **Compliance:** Compliance with this Service Bulletin is optional.
5. **Approval:** Engineering data referenced or contained in this Service Bulletin is approved as part of the type design.
6. **Labor** Approximately 2 hours will be required to accomplish the replacement of the battery relay contactor.

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
	X61-0028	Contactor, 12v, 100A	1
	31895	Ring Terminal	1
	36154	Ring Terminal	2
	MS3367-5-9	Cable ties	10
	M22759/16-20-9	Wire, 20 AWG	100mm
	MS21044N4	Locknut	2
	NAS1149F0463P	Washer	2
	AN4-5A	Bolt	2
	1N4007	Diode	1
	RNF100-1/8 CLEAR	Heatshrink	50mm

The above Materials may be ordered as kit **DA20-24-04-AML0**.

8. **Special Tools:** none
9. **References:** DA20-A1 Aircraft Maintenance Manual (AMM), Document DA201-A1
10. **Accomplishment Instructions:**
 - 10.1 Remove the upper cowl in accordance with AMM DA201-A1, Chapter 71-10-00.
 - 10.2 Disconnect the aircraft battery cables from the battery.
 - 10.3 Remove the battery relay contactor as show in Figure 1.

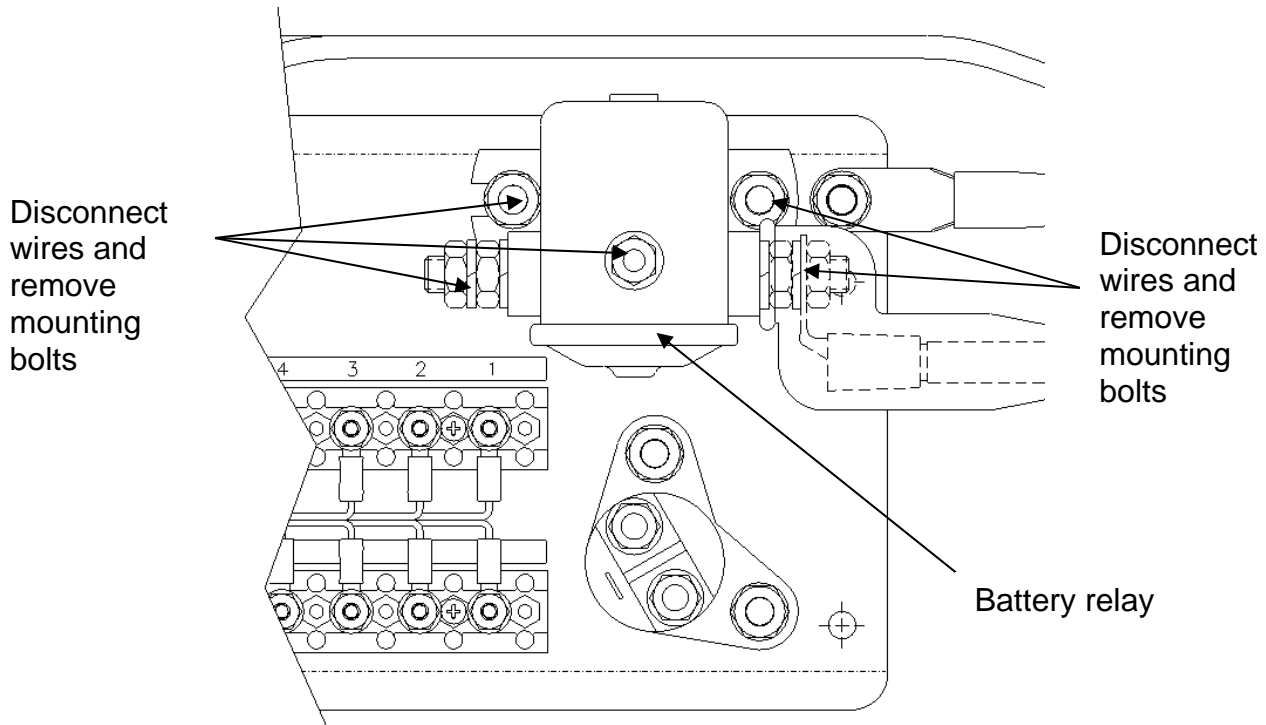
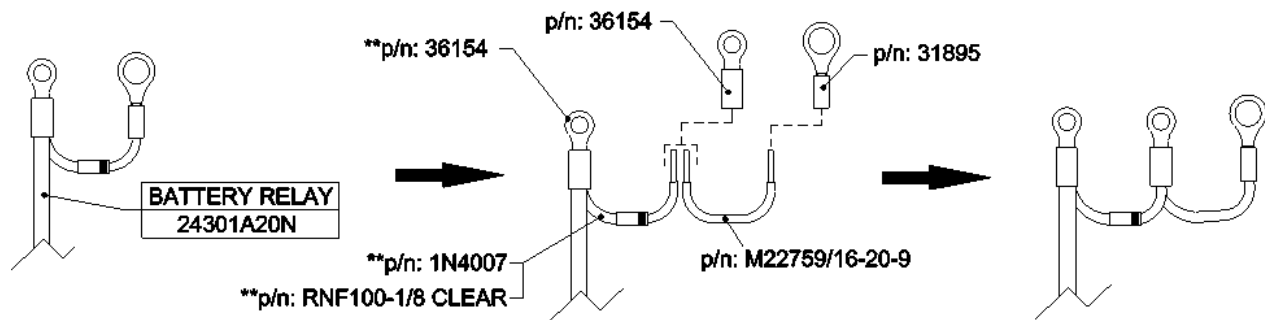


Figure 1: Relay Junction Box – Firewall

10.3.1 Rework the battery relay wire 24301A20N as shown in Figure 2.



****PARTS ONLY REQUIRED IF EXISTING DIODE IS DAMAGED OR SHORT.**

Figure 2: Relay Wire Modification

10.3.2 Install the new battery relay (P/N: X61-0028) using the supplied hardware, as shown in Figure 3.

NOTE: Relay mounting edge may need to be filed for clearance with ground stud. If filing is required apply suitable surface protection to all areas where filing occurs (Nycote 7-11 or equivalent).

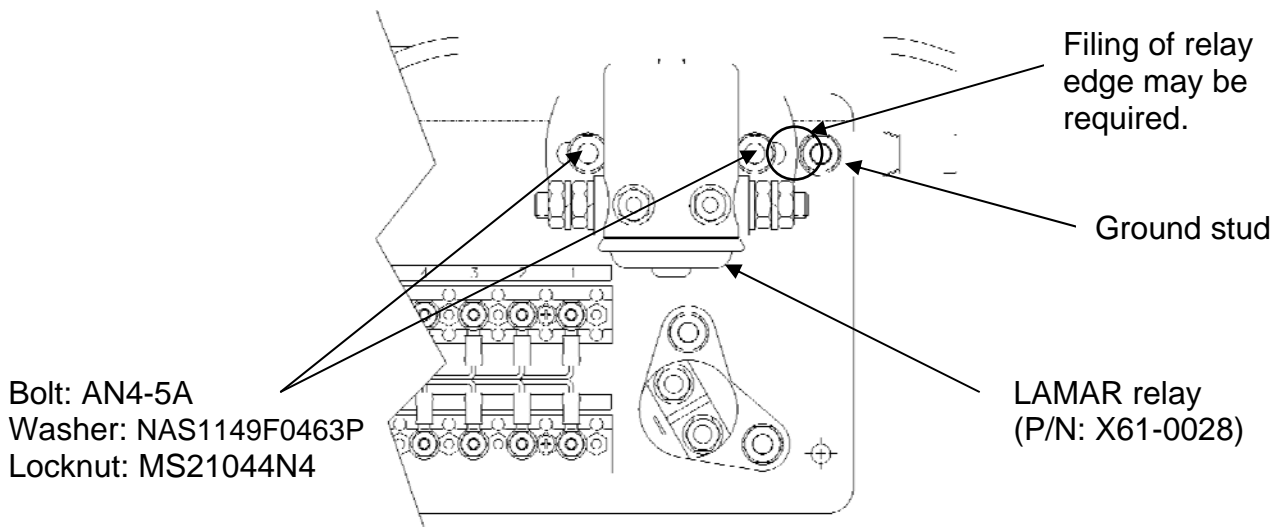


Figure 3: LAMAR relay installation

10.3.3 Connect the battery relay cables as shown in Figure 4. Secure with supplied cable ties (P/N: MS3367-5-9) as required.

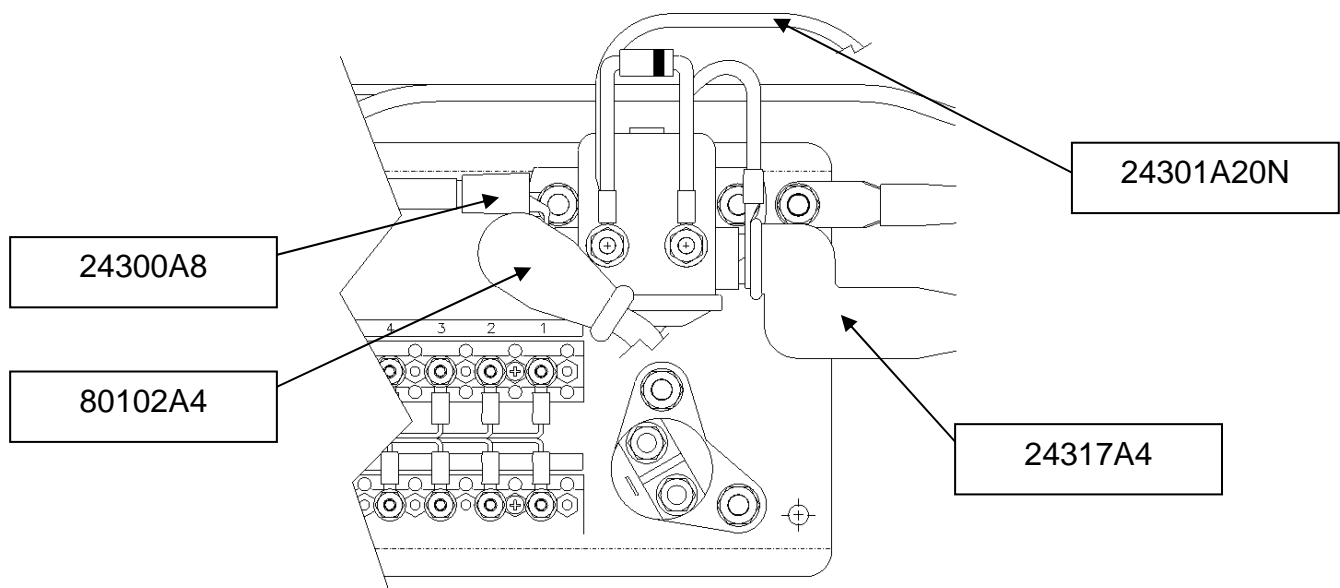


Figure 4: Relay wire attachments

10.3.4 Inspect for FOD in all areas where work occurred.

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- 10.3.5 Connect the aircraft battery cables to the battery (Cable 24317A4 attaches to the '+' terminal, cable 24318A4N attaches to the '-' terminal).
- 10.3.6 Carry out the battery relay function test:
 - 10.3.6.1 Ensure the battery circuit breaker is pushed.
 - 10.3.6.2 Turn the GEN/BAT switch ON.
 - 10.3.6.3 Confirm the Voltmeter reads voltage.
 - 10.3.6.4 Shut GEN/BAT switch to the OFF position.
- 10.3.7 Install the upper cowl in accordance with AMM DA201-A1, Chapter 71-10-00.
- 10.3.8 Make a log book entry that this Service Bulletin has been incorporated.

11. **Weight and Balance:** Make the following adjustments to the aircraft weight and balance.

Removed:

Relay Contactor	Part Number	Weight kg (lbs)	Arm inch (m)
battery relay	111-140d	-0.31 (-0.68)	-37.0 (-0.94)

Added:

Relay Contactor	Part Number	Weight kg (lbs)	Arm inch (m)
LAMAR battery relay	X61-0028	+0.45 (+0.99)	-37.0 (-0.94)

12. **Availability:** Contact Diamond Aircraft Industries Inc.

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

14. **Credit:** None

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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