

# SERVICE BULLETIN



Service Bulletin No.: D42L-27-01 Rev. 0

Date Issued: October 22, 2009

Title: **Modification to the  
Variable Elevator Stop System**

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- 1. ATA Code:** 2730
- 2. Effectivity:** DA42 L360 aircraft serial numbers 42.AC106, 42.AC132, 42.AC138, 42.AC142, 42.AC143, 42.AC144, 42.AC145, 42.AC148, 42.AC150, 42.AC151, 42.068, 42.086, 42.090, 42.202, 42.206, 42.207, 42.208, 42.209, 42.210, 42.211, 42.213, 42.277, 42.278 and 42.280.
- 3. General:** Compliance with this Service Bulletin disables the variable elevator stop (stick limiter) when the Flaps are set to the APP (approach) or LDG (landing) position, offering increased elevator authority.
- 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. Labour:** If wire 27310A22 is installed, approximately 2 hours will be required to accomplish this Service Bulletin.  
If wire 27310A22 is not installed, approximately 4 hours will be required to accomplish this Service Bulletin.

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

<b>7. Material:</b>	<b>Description</b>	<b>Qty</b>	<b>P/N</b>
	2 meters (m) of Wire, 22 AWG	1	M22759/16-22-9
	1.7 m of Wire, 22 AWG	1	M22759/16-22-9
	1 m of Wire, 22 AWG	1	M22759/16-22-9
	Expando	2 m	920-1-8-BKWH
	Expando	1 m	920-1-8-BKWH
	Pin (P2415)	1	205089-1
	Pin	5	60618-1
	Socket	5	60617-1
	2 Pin Connector (P2732)	1	1-480319-0
	2 Socket Connector (J2730)	1	1-480318-0
	3 Pin Connector (P2733)	1	1-480305-0
	3 Socket Connector (J2733)	1	1-480303-0
	Ring Terminal	1	36151

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Description	Qty	P/N
Socket (J2415)	1	205090-1
Labels	4	PS-250-2WT-2

The materials may be ordered as a Kit. Kit # D42L-27-01.

**8. Special Tools:** Ring Terminal Crimpers. AFM8 with Die Set K13 and Tyco 91528-1.

**9. References:** DA42 L360 Aircraft Maintenance Manual, Document # D42L-AMM-001.  
DA42 Series Airplane Maintenance Manual, Document # 7.02.01.

## 10. Accomplishment Instructions

- 10.1 Disconnect the aircraft battery. Refer to AMM # 7.02.01 Chapter 24-31.
- 10.2 Remove the instrument panel cover. Refer to AMM # 7.02.01 Chapter 25-10.
- 10.3 Remove the Multi Function Display (MFD). Refer to AMM # 7.02.01 Chapter 31-40.
- 10.4 Get access to the rear of the Flap switch, behind the instrument panel and below the MFD.
- 10.5 At the Flap switch, if wire 27310A22 is installed, move the ring terminal from terminal 3 to terminal 1. Refer to Figure 1.
- 10.6 If wire 27310A22 is not installed, use the 1 m 22 AWG wire (P/N M22759/16-22-9) provided.
  - 10.6.1 Install the ring terminal (P/N 36151) provided to one end of the wire.
  - 10.6.2 Install socket J2415 (P/N 205090-1) provided to the other end of the wire.
  - 10.6.3 Connect the ring terminal to terminal 1 of the Flap switch and the socket to connector J2415, position 23.
- 10.7 Secure the wiring.
- 10.8 Install the MFD. Refer to AMM # 7.02.01 Chapter 31-40
- 10.9 Remove the pilot's seat. Refer to AMM # 7.02.01 Chapter 25-10.
- 10.10 Remove the copilot's seat. Refer to AMM # 7.02.01 Chapter 25-10.
- 10.11 Remove the stick limiter extension-harness (P/N C61-2427-101-001) between J2730 and P2732.

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- 10.12 Remove the caps from the stowed wires for connectors P2732, J2730, J2733 and P2733. Terminate the wiring as shown in Figure 1 at switch RL 3 and apply the correct labels (P/N PS-250-2WT-2) provided.
  - 10.13 Connect the mating connectors correctly.
  - 10.14 If wire 27310B22 is not installed in pin 1 of P2733, do as follows: Refer to Figure 1.
    - 10.14.1 Put the 1.7 m 22 AWG wire (P/N M22759/16-22-9) provided in expando (P/N 920-1-8-BKWH) provided. Trim the expando to the length of the wire.
    - 10.14.2 Put the wire and expando through the center-forward fuselage harness.
    - 10.14.3 Install pin P2415 (P/N 205089-1) provided on the wire end and install it in connector P2415 at pin position 23.
    - 10.14.4 Install pin P2733 (P/N 60618-1) provided on the other wire end and install it in connector P2733 at pin position 1.
  - 10.15 If wires 27306A22N and 27307A22 are not installed in either P3202 or P2733, do as follows: Refer to Figure 1.
    - 10.15.1 Splice wire 27306A22N to wire 27303C22N at the P3202 connector.
    - 10.15.2 Splice wire 27307A22 to wire 27300C22 at the P3202 connector
    - 10.15.3 Route wires in the 1 m expando (P/N 920-1-8-BKWH) provided to the stick limiter along existing harnesses.
    - 10.15.4 Connect wires in the P2733 as shown in Figure 1.
  - 10.16 Secure the wiring.
  - 10.17 Do an Operational Test of the Stick Limiter as follows:
    - 10.17.1 Connect the aircraft battery. Refer to AMM # 7.02.01 Chapter 24-31.
    - 10.17.2 Set the ELECT MASTER switch to ON.
    - 10.17.3 Set the Flaps to the UP position and move the THROTTLE levers full forward. The stick limiter should engage and move the stick limiter actuator slightly to the right.
    - 10.17.4 Move the THROTTLE to the full back position. The stick limiter should disengage and move the stick limiter actuator slightly to the left.

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- 10.17.5 Move the THROTTLE levers full forward again. The stick limiter should engage and move the stick limiter actuator slightly to the right.
  - 10.17.6 Once the stick limiter is engaged, select the Flaps to the APP position. The stick limiter should disengage and move the stick limiter actuator slightly to the left.
  - 10.17.7 Cycle the THROTTLE levers full forward and back. The stick limiter should not engage.
  - 10.17.8 Set the Flaps to the LDG position. Cycle the THROTTLE levers full forward and back. The stick limiter should not engage.
  - 10.17.9 Move the THROTTLE levers full forward and set the Flaps to the UP position. The stick limiter should engage and move the stick limiter actuator slightly to the right.
  - 10.17.10 Move the THROTTLE levers to the IDLE position.
  - 10.17.11 Set the ELECT MASTER switch to OFF.
  - 10.18 Install the copilot's seat. Refer to AMM # 7.02.01 Chapter 25-10.
  - 10.19 Install the pilot's seat. Refer to AMM # 7.02.01 Chapter 25-10.
  - 10.20 Install the instrument panel cover. Refer to AMM # 7.02.01 Chapter 25-10.
  - 10.21 Insert Revision 5 of the Airplane Flight Manual D42L-AFM-002.

NOTE: The procedures in Revision 5 of the AFM agree with the operation of the Stick Limiter after compliance with this service Bulletin.

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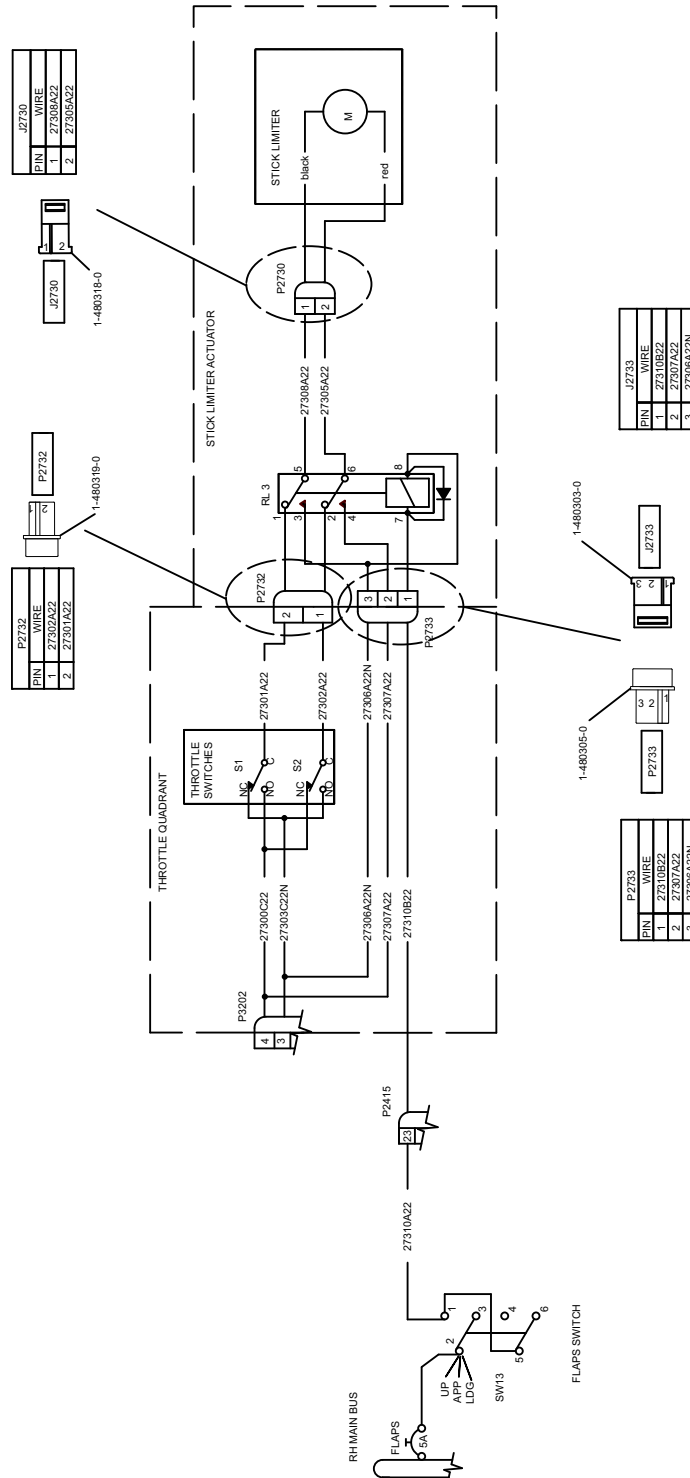


Figure 1 - Stick Limiter Schematic

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**11. Weight and Balance:** The weight and balance is not affected by this Service Bulletin.

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

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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