

ACCOMPLISHED AT
DOUGLAS PRIOR TO
DELIVERY

Bulletin 52-27
DC-10 SC 612

This page transmits Revision 1 for DC-10 Service Bulletin 52-27 to incorporate the following changes:

NOTE: This revision constitutes a complete reissue.

Reason for Revision: To provide additional access information and delete six aircraft from Service Bulletin Effectivity which will have this modification incorporated prior to delivery. No additional work is required by this revision.

Page 1: Changed page number to 1 of 10, was 1 of 9.

Deleted paragraphs 1.A.(1)(a) and 1.A.(1)(b) headings.

Revised Service Bulletin Effectivity as follows:

<u>Operator</u>	<u>Deleted</u>
AA	46516 and 46517 (No. 48 and 49)
<u>Other Aircraft</u>	<u>Deleted</u>
	<u>46704</u> and 46705 (No. 29 and 33)
	46905 and 46906 (No. 47 and 50)

Changed kit quantities accordingly.

Page 2: Revised paragraph 1.F to provide additional man-hours and add NOTE.

Page 4: Revised Maintenance Manual chapter reference.

Pages 5 and 6: Deleted NOTE and revised kit heading and paragraphs 2.A, 2.D, and 2.E.

CWF

May 30/72

Bulletin 52-27

Revision 1 June 26/72



DC-10

3855 Lakewood Boulevard
Long Beach, California 90801

SERVICE BULLETIN

BULLETIN 52-27
DC-10 SC 612

DOORS - Cargo - Revise Door Latch Actuator Wiring.

1. Planning Information:

A. Effectivity:

(1) Aircraft Affected:

Model DC-10, Series 10

<u>Operator</u>	<u>Factory Serial No.</u>	<u>*Mfr's Fuselage No.</u>	<u>Qty of Kits</u>	
			<u>CZ0612</u>	<u>-501 -503</u>
AA	46502 thru 46515	3, 5, 7, 9, 12, 13, 20 thru 24, 30, 31, and 37	14	
CO	46900 thru 46904	34, 40, 41, 43, and 44		5
NA	46700 thru 46703 46706	14, 16, 18, and 19 38	5	
UA	46600 thru 46614	4, 6, 8, 10, 11, 15, 17, 25 thru 27, 32, 35, 39, 42, and 45	15	

Affected aircraft other than those listed above will be modified prior to delivery or included in a subsequent revision to this Service Bulletin.

*Manufacturer's fuselage numbers are applicable to affected aircraft at time of Service Bulletin issue and are for reference only.

(2) Spares Affected:

None.

May 30/72

Bulletin 52-27

Revision 1 June 26/72

Page 1 of 10

B. Reason:

Three operators have reported failure of the electrical latch actuators to latch/unlatch the cargo doors. Latch actuator failure is attributed to an excessive voltage drop reducing the output torque to the actuator. This condition may prevent electrical latching/unlatching of the hooks. Failure to provide adequate torque necessitates manual latching/unlatching of the doors resulting in flight delays. Increasing the wire gage between the circuit breakers and the actuators will reduce the voltage drop and provide adequate torque to operate the latch hooks under all anticipated conditions.

C. Description:

CZZ0612-501 and -503 Kits

This modification revises cargo door latch actuator wiring as follows:

- (1) Replaces wiring between the cargo door latch motor circuit breakers in the center accessory compartment and the door latch relays on the forward, center, and aft cargo compartment equipment panels, with wiring of heavier gage.
- (2) Replaces wiring between the aft cargo door latch relay on the center cargo compartment equipment panel and the terminal strip on the aft cargo door frame, with wiring of heavier gage.

D. Compliance:

Recommended.

E. Approval:

This Service Bulletin is FAA approved.

F. Manpower:

This modification may be accomplished in the following approximate man-hours or elapsed hours per aircraft.

Work Phases	Man-Hours	
	Kit CZZ0612 -501 or -503	(S) Spares Affected
Gain Access	5.5	
Modify (Aircraft)	21.0	
Close Up	9.0	
Functional Check	.2	
Total Man-Hours	35.7	
Total Elapsed Hours	8.0	

NOTE: Man-hours may vary slightly for aircraft incorporating conduit over wheel well area, fuselage numbers 2 through 15.

G. Material - Cost and Availability:

(1) Aircraft:

Operators with aircraft listed under paragraph 1.A.(1) should submit a "no charge" purchase order for service change kits in the quantities shown.

The purchase order must specify this Service Bulletin number and only parts listed herein.

Operators will be advised of delivery schedule upon receipt of purchase order. Direct purchase order to:

Douglas Aircraft Company
P.O. Box 1771
Long Beach, California 90801
Attn: Manager, Warranty 7-21

A "no charge" purchase order for kits under the provisions of this bulletin must be received not later than 90 days after the issue date noted on page 1. Any purchase order received after the 90-day period will be processed on a charge basis.

(2) Spares:

Not applicable.

H. Tooling - Price and Availability:

None.

I. Weight and Balance:

CZZ0612-501 or -503 Kit

This modification will increase the weight of the aircraft at approximately station 1630.0 as follows:

(1) Mfr's Empty Weight (MEW) Increase	+5.2 LB
(2) Moment Change (MEW)	+8476 IN.-LB
(3) Index Unit Change (MEW)	+0.1



J. References:

Data used in preparation of this Service Bulletin:

<u>Data Identification</u>	<u>Change</u>	<u>Type of Data</u>
ACP7012	CZ	Advance E.O.
ACP8023	N	Advance E.O.
ACP8024	ER	Advance E.O.
ACP9010	AL	Advance E.O.
ACP9606	N	Advance E.O.
ACP9901	CV	Advance E.O.
AGP7005	AB	Advance E.O.
AGP9101	J	Advance E.O.
AGP9115	K	Advance E.O.
AGP9201	AS	Advance E.O.
MM Chapters 6 and 52		Maintenance Manual
52-31-01 (Pages 4 and 5)	New	Wiring Diagram
52-32-01 (Page 3)	New	Wiring Diagram
52-33-01 (Pages 4 and 5)	New	Wiring Diagram

K. Publications Affected:

The modification outlined in this Service Bulletin affects the following DAC DC-10 aircraft publications.

<u>Publication</u>	<u>Chapter and/or Section</u>
Wiring Diagram Manual	52-31
Wiring Diagram Manual	52-32
Wiring Diagram Manual	52-33

2. Accomplishment Instructions:

CAUTION: STATICALLY GROUND THE AIRCRAFT. DISCONNECT ALL ELECTRICAL POWER PRIOR TO STARTING THIS MODIFICATION.

CZZ0612-501 and -503 Kits

- A. Gain access to applicable compartment and remove panels listed in Table I. Retain panels and attaching parts.

TABLE I

COMPARTMENT	TYPE OF PANEL	PANEL NO.	MAINTENANCE MANUAL CHAPTER REFERENCE
Passenger	Floor	262AF 262CF	6-32-10
Forward Cargo	Wall	127BR 127CR	6-32-03
Center Cargo	Wall	183ER	6-32-05
	Ceiling	183CC* 183FC* 183JC* 183MC* 183QC* 183TC* 183VC** 183ZC** 183LC 183NC 183RC 183SC	
Aft Cargo	Bulkhead	187AE	6-32-06

* Partial removal (aft end).

** Partial removal (forward end).

- B. Install clamp in center accessory compartment as shown on Figure 1.
- C. Revise forward, center, and aft cargo door latch actuator wiring as shown on Figure 2, using CZZ0612-3 or -5 wire package as applicable. Perform continuity checks during installation.

NOTE: New wiring is to be routed identical to wiring being replaced, except as noted, using existing clamps and new clamp installed in paragraph 2.B.

- D. Functionally check cargo doors. (See Maintenance Manual Chapter 52-30-00.)
- E. Reinstall panels using retained attaching parts and close doors, as applicable.
- F. Revise existing wiring diagrams to reflect this modification.

A. Gain access to applicable compartment and remove panels listed in Table I. Retain panels and attaching parts.

TABLE I

COMPARTMENT	TYPE OF PANEL	PANEL NO.	MAINTENANCE MANUAL CHAPTER REFERENCE
Passenger	Floor	182AF 182CF	6-32-10
Forward Cargo	Wall	182BR 182CR	6-32-03
Center Cargo	Wall	183ER	6-32-05
	Ceiling	183C* 183FC* 183JC* 183MC* 183DC* 183TC* 183VC** 183ZC** 183LC 183MC 183RC 183SC	
Aft Cargo	Bulkhead	187AE	6-32-06

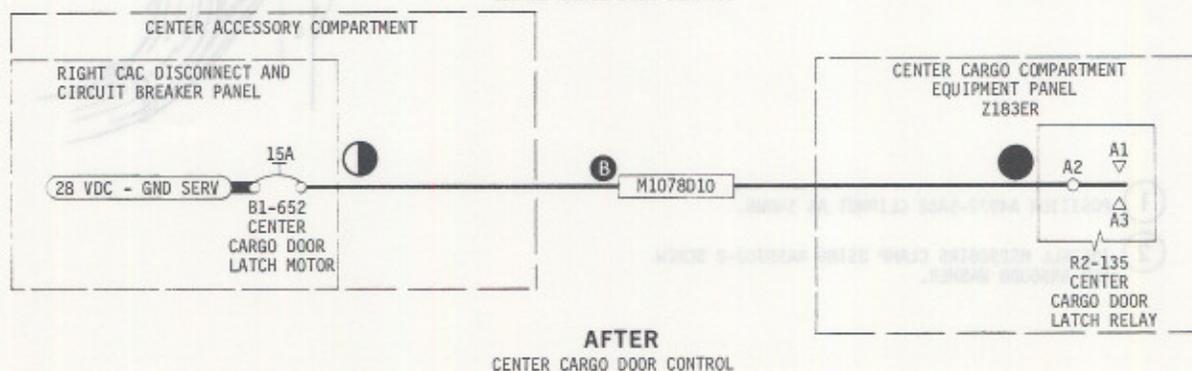
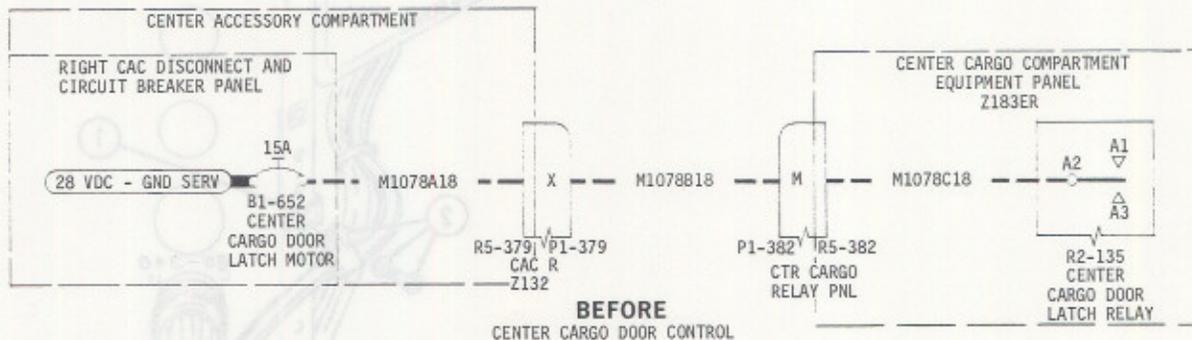
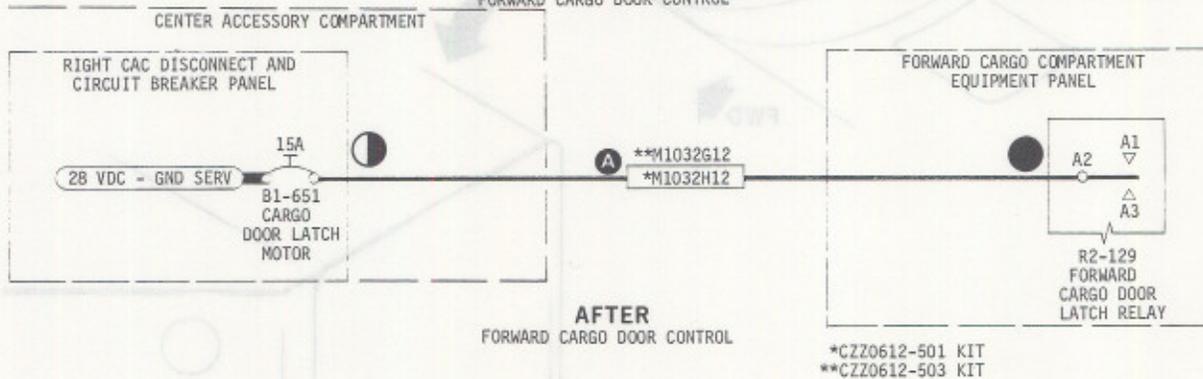
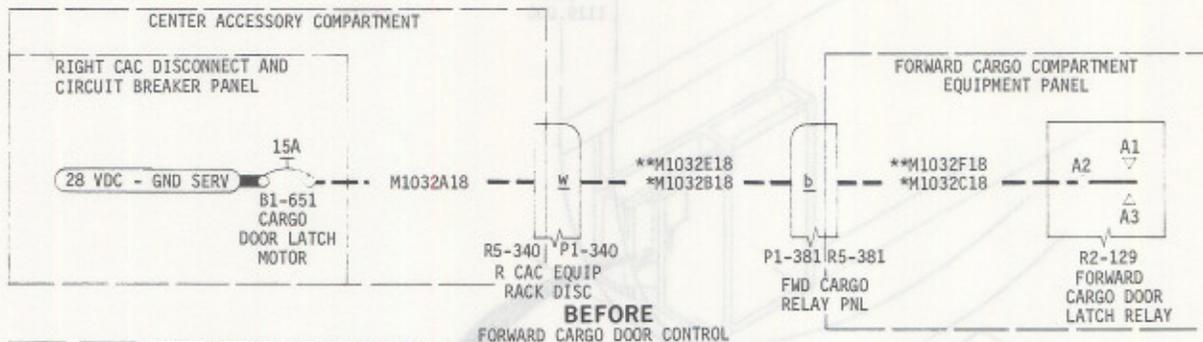
* Partial removal (aft end).

** Partial removal (forward end).

- B. Install clamp in center accessory compartment as shown on Figure 1.
- C. Revise forward, center, and aft cargo door latch actuator wiring as shown on Figure 2, using CZ30812-3 or -5 wire package as applicable. Perform continuity checks during installation.

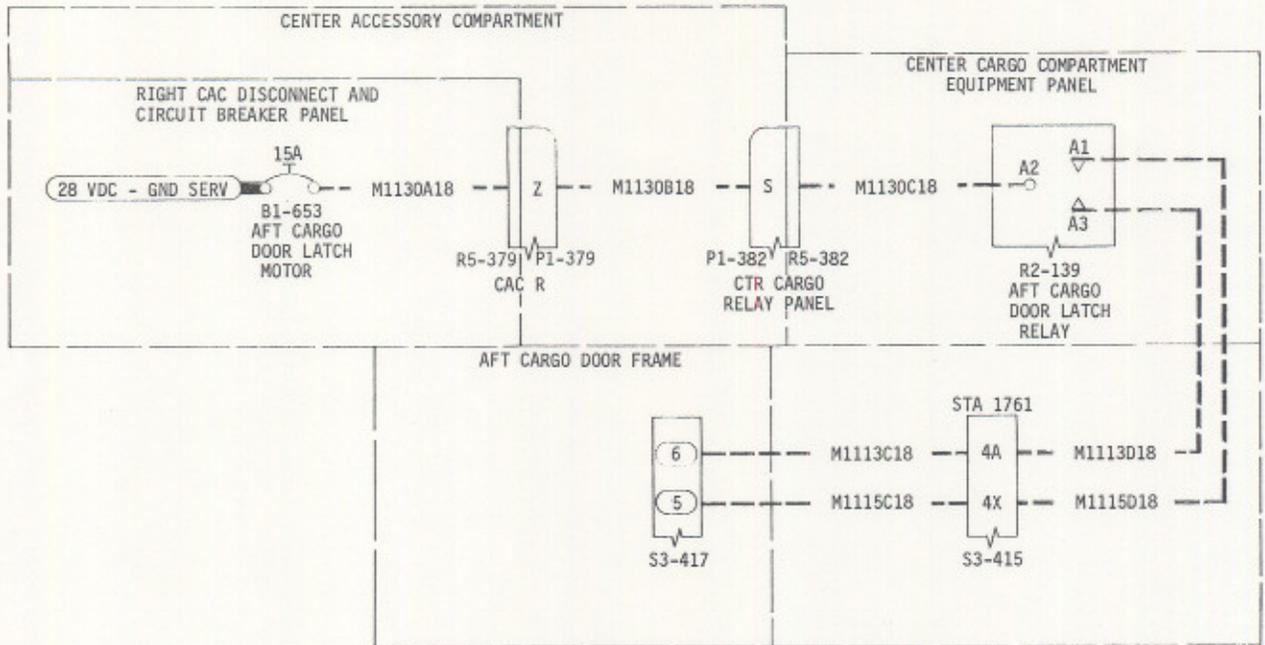
NOTE: New wiring is to be routed identical to wiring being replaced, except as noted, using existing clamps and new clamp installed in paragraph 2.B.

REVISION IS TYPICAL FOR CZZ0612-501 AND -503 KITS, EXCEPT AS NOTED

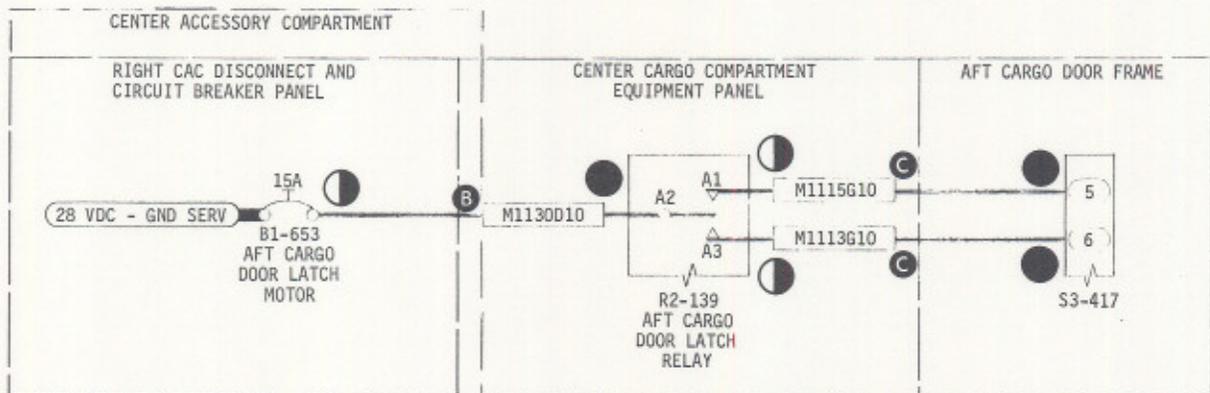


CARGO DOOR LATCH ACTUATOR WIRING - REVISION

FIGURE 2 (SHEET 1 OF 2)



BEFORE
AFT CARGO DOOR CONTROL



AFTER
AFT CARGO DOOR CONTROL

LEGEND

XXXXXX	TO BE REMOVED
XXXXXX	ADDED WIRE

A	(EGX)(EAM)(DAB)(DGE)
B	(EGX)(EAM)(DAB)(EAF)(EAH)(ENZ)
C	(ENZ)(EAH)(ENG)(EAE)(ENM)

NEW PARTS ADDED		
CODE	PART NO.	KEY WORD
●	YAEV10	TERMINAL
◐	YAEV10-T11	TERMINAL

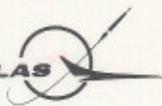
CARGO DOOR LATCH ACTUATOR WIRING - REVISION

May 30/72

FIGURE 2 (SHEET 2 OF 2)

Bulletin 52-27

Revision 1 June 26/72



3. Material Information:

A. The basis for the following material data is per aircraft.

(1) Parts furnished in service change kits at no charge.

<u>New Part No.</u>	<u>Qty Per Kit</u>		<u>Key Word</u>	<u>Instructions- Disposition</u>
	<u>CZZ0612 -501</u>	<u>-503</u>		
AN960D8	1	1	Washer	
A4972-5A82	1	1	Clipnut	
CZZ0612-3	1		Wire Package	1/
CZZ0612-5		1	Wire Package	2/
MS25281R5	1	1	Clamp	
NAS5902-8	1	1	Screw	
YAEV10	5	5	Terminal	
YAEV10-T11	5	5	Terminal	

1/ The CZZ0612-3 wire package consists of the following wires:

<u>Wire No.</u>	<u>Length (Inches)</u>
M1032H12	300
M1078D10	820
M1113G10	500
M1115G10	500
M1130D10	820

2/ The CZZ0612-5 wire package consists of the following wires:

<u>Wire No.</u>	<u>Length (Inches)</u>
M1032G12	300
M1078D10	820
M1113G10	500
M1115G10	500
M1130D10	820

B. The basis for the following material data is per spares.

None.

CWF

May 30/72

Revision 1 June 26/72

Bulletin 52-27

Page 10