



TRANSMITTAL LETTER

1. DESCRIPTION

This sheet transmits Revision 01 to Service Bulletin 500-27-A026.

This is a complete reissue of the Service Bulletin.

This revision incorporates the information presented in the Information Notice related to the previous issues of this Service Bulletin, as listed below:

None.

2. ADDITIONAL ACTION

Aircraft that have complied with the previous issue of this service bulletin do not need any additional action.

3. RECORD OF REVISION

Basic issue: 29/Sep/2017

Revision 01: 06/Oct/2017

4. HIGHLIGHTS

The topics, affected pages, and a brief description of the content-related changes introduced by this revision are presented below.

Revision bars are put in the left margin of each page to show the location of the significant changes. Text displacement and text format changes are not indicated.

TOPIC/PAGE	DESCRIPTION OF REVISION
1. PLANNING INFORMATION	
1.A. SB EFFECTIVITY / 01	Added aircraft to the SB effectivity.
1.C. REASON / 02	Added reason for Revision 01.



FLIGHT CONTROLS - AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB INSPECTION AND TORQUE

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1. PLANNING INFORMATION

A. SB EFFECTIVITY

- (1) PART I: INSPECTION OF AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB

Aircraft affected:

MODEL	SN
EMB-500 'Phenom 100'	50000246, 50000267, 50000286, 50000289, 50000291, 50000299, 50000304 thru 50000306, 50000310, 50000348, 50000359, 50000368, 50000370, 50000372, and 50000376 thru 50000380.

- (2) PART II: AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB COTTER PIN INSTALLATION AND TORQUE

Aircraft affected:

MODEL	SN
EMB-500 'Phenom 100'	50000246, 50000267, 50000286, 50000289, 50000291, 50000299, 50000304 thru 50000306, 50000310, 50000348, 50000359, 50000368, 50000370, 50000372, and 50000376 thru 50000380.

In-production effectivity:

The subject presented in this bulletin does not affect any in-production aircraft.



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B. CONCURRENT REQUIREMENTS

None.

C. REASON

(1) HISTORY

At the assembly line, during an inspection, the aileron trim tab, rudder trim tab and elevator trim tab were found without cotter pin installed.

(2) OBJECTIVE

To inspect the aileron trim tab, rudder trim tab and elevator trim tab, apply torque and to install the cotter pin, as necessary.

(3) EXPECTED BENEFITS

The inspection and torque are aimed to make sure that the components are correctly installed to avoid total loss of trim tab actuation connection which could cause flutter and possible loss of airplane control.

(4) REVISION HISTORY

Revision 01.

- This revision is issued to add aircraft to the SB effectivity.

D. DESCRIPTION

(1) PART I: INSPECTION OF AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB

The modification presented in PART I of this service bulletin consists of inspecting the aileron trim tab, rudder trim tab and elevator trim tab. If the aileron trim tab, rudder trim tab or elevator trim tab is found without cotter pin installed, apply torque to the aileron trim tab, rudder trim tab and to the elevator trim tab and install cotter pin to them, as given in PART II of this service bulletin.



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(2) PART II: AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB COTTER PIN INSTALLATION AND TORQUE

The modification presented in PART II of this service bulletin consists of to apply torque to the aileron trim tab, rudder trim tab and elevator trim tab and to install cotter pin to them.

E. COMPLIANCE

Embraer recommends that PART I and PART II of this bulletin be accomplished within the next 50 flight hours.

F. APPROVAL

The technical aspects of this Service Bulletin are approved by: Embraer - Engineering Board.

G. ESTIMATED MANPOWER

This estimate is for direct labor only, performed by experienced personnel, and does not include the time to plan, prepare, or inspect the work.

It is assumed that all the tools, parts, and other means are promptly available when necessary.

This estimate does not include the sealant, paint, or adhesive curing time.

(1) APPLICABLE TO PART I:

INSPECTION OF AILERON TRIM TAB, RUDDER TRIM TAB AND ELEVATOR TRIM TAB

- Access opening: None.
- Inspection: 1.0 man-hour.
- Access closure: None.
- Test: Not applicable.



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(2) APPLICABLE TO PART II:

AILERON TRIM TAB COTTER PIN INSTALLATION AND TORQUE

- Access opening: 0.1 man-hours.
- Modification: 0.3 man-hours.
- Access closure: 0.1 man-hours.
- Test: 0.5 man-hours.

RUDDER TRIM TAB COTTER PIN INSTALLATION AND TORQUE

- Access opening: 0.1 man-hours.
- Modification: 0.3 man-hours.
- Access closure: 0.1 man-hours.
- Test: 0.5 man-hours.

ELEVATOR TRIM TAB COTTER PIN INSTALLATION AND TORQUE

- Access opening: 0.1 man-hours.
- Modification: 0.3 man-hours.
- Access closure: 0.1 man-hours.
- Test: 0.5 man-hours.

H. COMMUNICATIONS TO EMBRAER

EMBRAER requests that any results found during these inspections be informed to your local EMBRAER representatives or offices (contact.center@embraer.com.br).



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I. REFERENCES

AMM 500/()	Aircraft Maintenance Manual PART II - 20-00-00 - STANDARD PRACTICES-AIRFRAME.
AMM 500/()	Aircraft Maintenance Manual PART II - 27-14-02, 27-14-03, 27-24-02, 27-24-03, 27-34-02, and 27-34-05 - FLIGHT CONTROLS.

J. PUBLICATIONS AFFECTED

None.



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2. MATERIAL INFORMATION

A. MATERIAL - PRICE AND AVAILABILITY

None.

B. INDUSTRY SUPPORT INFORMATION

(1) WARRANTY COVERAGE

(a) Parts

The SB parts will be provided at no charge.

(b) Labor

Embraer will compensate the man-hours listed in [1.G. ESTIMATED MAN-POWER](#) if it is performed in an Embraer-authorized service center

(c) Expiration

Not applicable.

C. MATERIAL NECESSARY FOR EACH AIRCRAFT

The expendable or consumable parts presented in the AMM Tasks referred to in this bulletin, which are necessary for its accomplishment, should be procured from the operator's inventories or ordered as spares.

(1) MATERIAL TO BE PROCURED

(a) APPLICABLE TO PART II - Parts

The parts below should be procured from Embraer as spare part.

NEW PN	DESCRIPTION	OLD PN	QTY	DISP
MS24665-86	Cotter Pin	MS24665-86	16	7
MS24665-151	Cotter Pin	MS24665-151	04	7



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NEW PN	DESCRIPTION	OLD PN	QTY	DISP
MS24665-153	Cotter Pin	MS24665-153	04	7

DISPOSITION: 7 = Replace with part bearing same PN



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3. ACCOMPLISHMENT INSTRUCTIONS

The steps below outline the general accomplishment instructions.

The detailed sequence is included in the respective figure, when necessary.

A. Make sure that the aircraft is safe for maintenance. Refer to [AMM TASK 20-00-00-910-801-A/200](#) - Aircraft Maintenance Safety Procedures.

B. APPLICABLE TO PART I:

- (1) Inspect the aileron trim tab, rudder trim tab and elevator trim tab attachment points to make sure the cotter pin is installed. Refer to [Figure 1](#), [Figure 2](#) and [Figure 3](#).

NOTE: You can move the surface to have a view of the entire installation.

- (2) If the cotter pin is installed, no action is required.

- (3) If the cotter pin is not installed, perform PART II of this service bulletin.

C. APPLICABLE TO PART II:

- (1) Torque and Install the aileron trim tab cotter pin, as follows:

- (a) Apply torque to the aileron trim tab, according to [AMM TASK 27-14-02-400-801-A/400](#) - Roll Trim Actuator - Installation and [AMM TASK 27-14-03-400-801-A/400](#) - Aileron Trim-Tab Surface - Installation. Refer to [Figure 4](#).
- (b) Install the cotter pin, according to [AMM TASK 27-14-02-400-801-A/400](#) - Roll Trim Actuator - Installation and [AMM TASK 27-14-03-400-801-A/400](#) - Aileron Trim-Tab Surface - Installation. Refer to [Figure 4](#).
- (c) Perform the backlash procedure according to [AMM TASK 27-14-03-720-801-A/500](#) - Aileron Trim-Tab Backlash - Functional Check.

- (2) Torque and Install the rudder trim tab cotter pin, as follows:

- (a) Apply torque to the rudder trim tab, according to [AMM TASK 27-24-02-400-801-A/400](#) - Yaw Trim Actuator - Installation and [AMM TASK 27-24-03-400-801-A/400](#) - Rudder Trim-Tab Surface - Installation. Refer to [Figure 5](#).



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- (b) Install new cotter pin, according to [AMM TASK 27-24-02-400-801-A/400](#) - Yaw Trim Actuator - Installation and [AMM TASK 27-24-03-400-801-A/400](#) - Rudder Trim-Tab Surface - Installation. Refer to [Figure 5](#).
 - (c) Perform the backlash procedure according to [AMM TASK 27-24-03-720-801-A/500](#) - Rudder Trim-Tab Backlash - Functional Check.
- (3) Torque and Install the elevator trim tab cotter pin, as follows:
- (a) Apply torque to the elevator trim tab, according to [AMM TASK 27-34-02-400-801-A/400](#) - Pitch Trim Actuator - Installation and [AMM TASK 27-34-05-400-801-A/400](#) - Elevator Trim-Tab Surface - Installation. Refer to [Figure 6](#).
 - (b) Install new cotter pin, according to [AMM TASK 27-34-02-400-801-A/400](#) - Pitch Trim Actuator - Installation and [AMM TASK 27-34-05-400-801-A/400](#) - Elevator Trim-Tab Surface - Installation. Refer to [Figure 6](#).
 - (c) Perform the backlash procedure according to [AMM TASK 27-34-05-720-801-A/500](#) - Elevator Trim-Tab Backlash - Functional Check.
- D. Restore the aircraft to normal. Refer to [AMM TASK 20-00-00-910-801-A/200](#) - Aircraft Maintenance Safety Procedures.
- E. Enter the accomplishment of this bulletin in the applicable documents.
- F. Fill out the attached "Service Bulletin Implementation and Evaluation" form and return it to:
- NOTE:** To formally inform that the SB has been incorporated fleet-wide or that the SB will not be incorporated, so that Embraer can update the affected technical publications, use the "Service Bulletin Full-Fleet Incorporation Report" form, which is available on the FLYEmbraer portal (<http://www.flyembraer.com>).

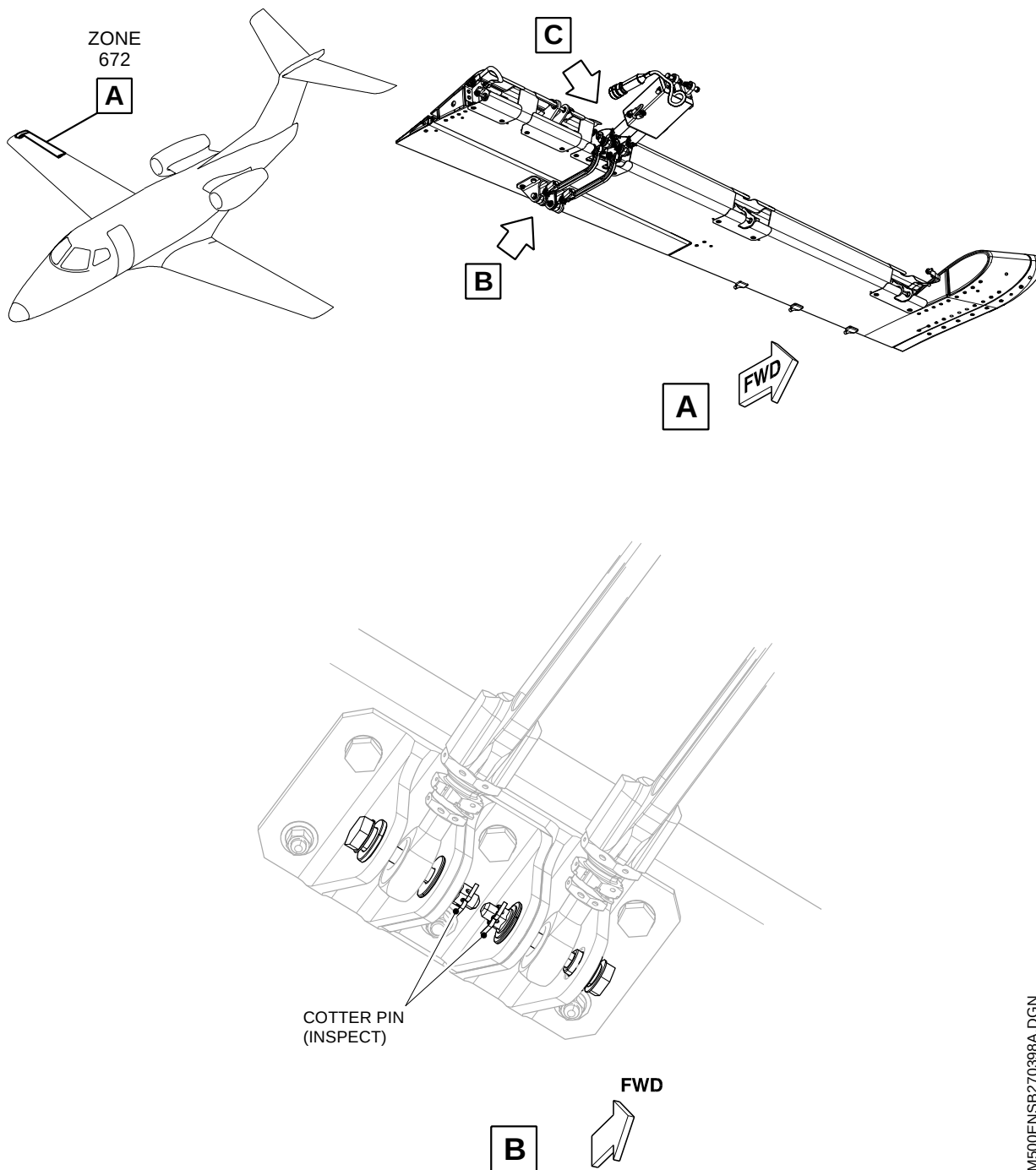


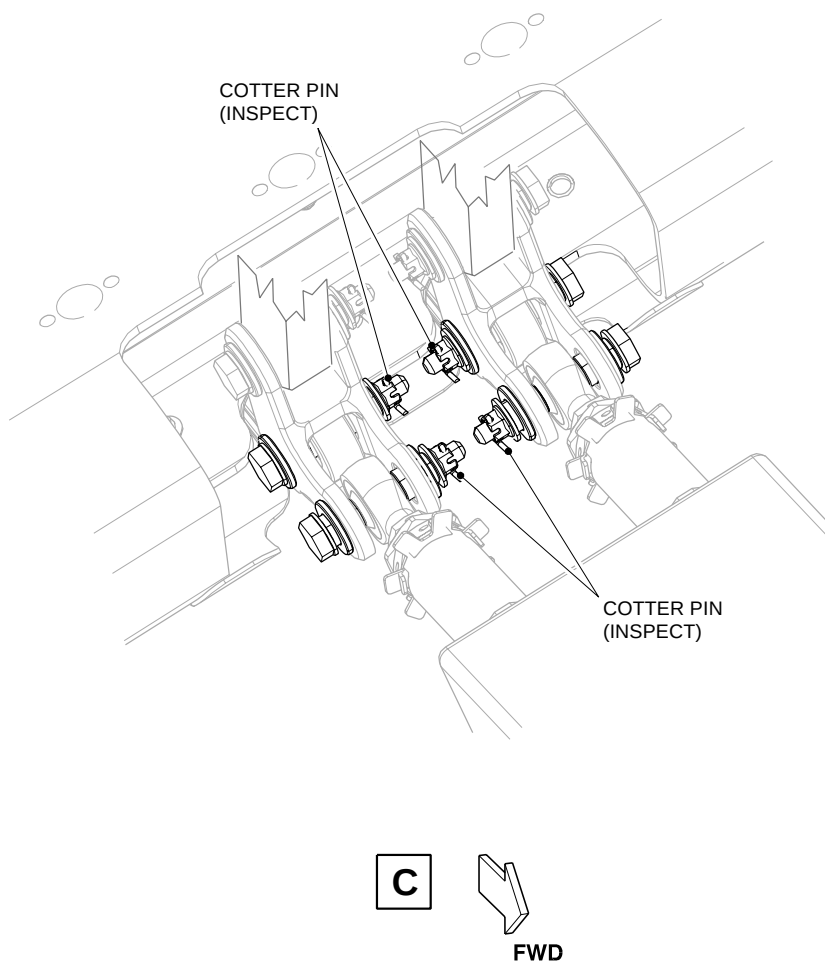
FIGURE 1 - AILERON TRIM TAB INSPECTION
(SHEET 01 OF 02)

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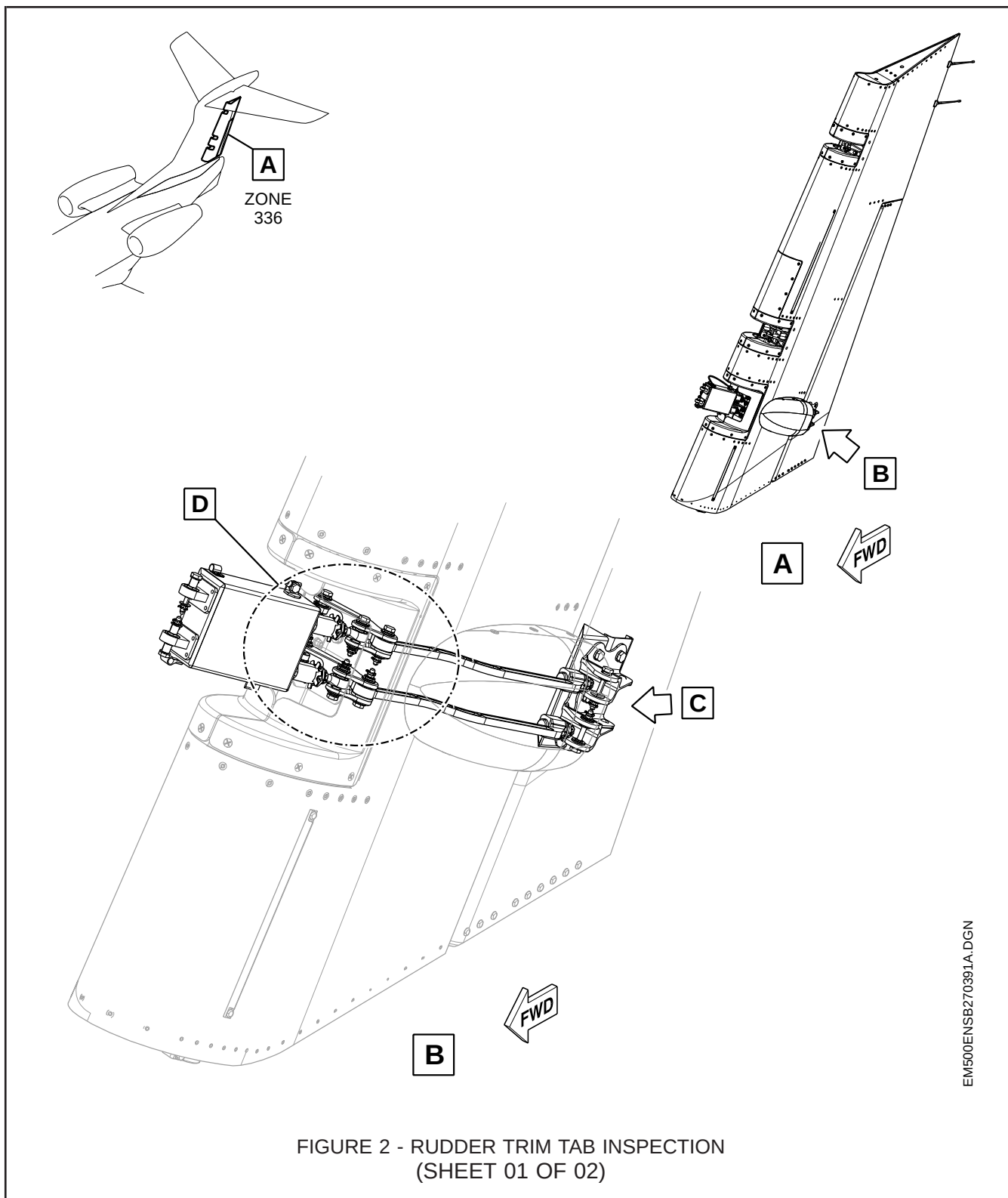
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FIGURE 1 - AILERON TRIM TAB INSPECTION
(SHEET 02 OF 02)



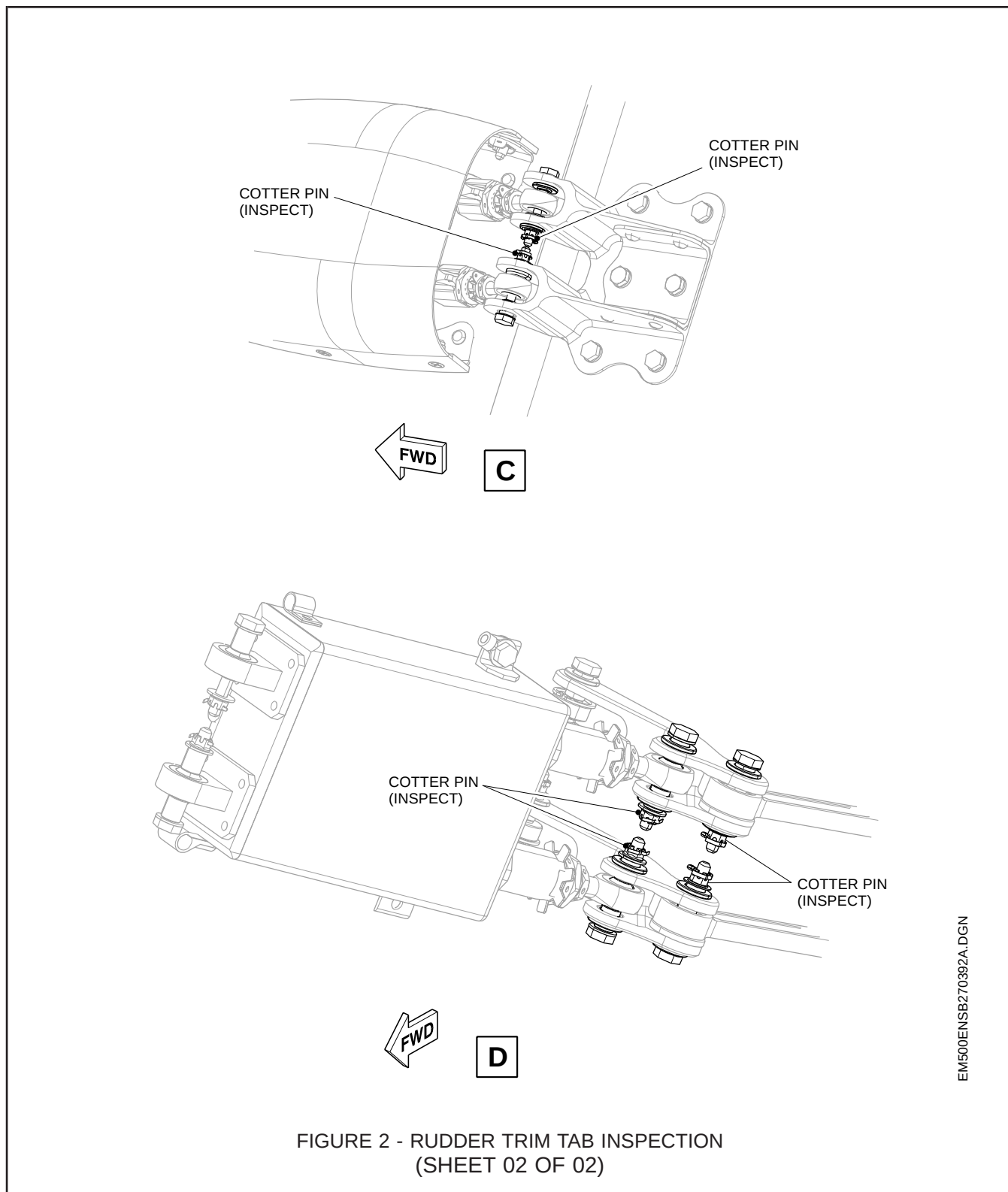
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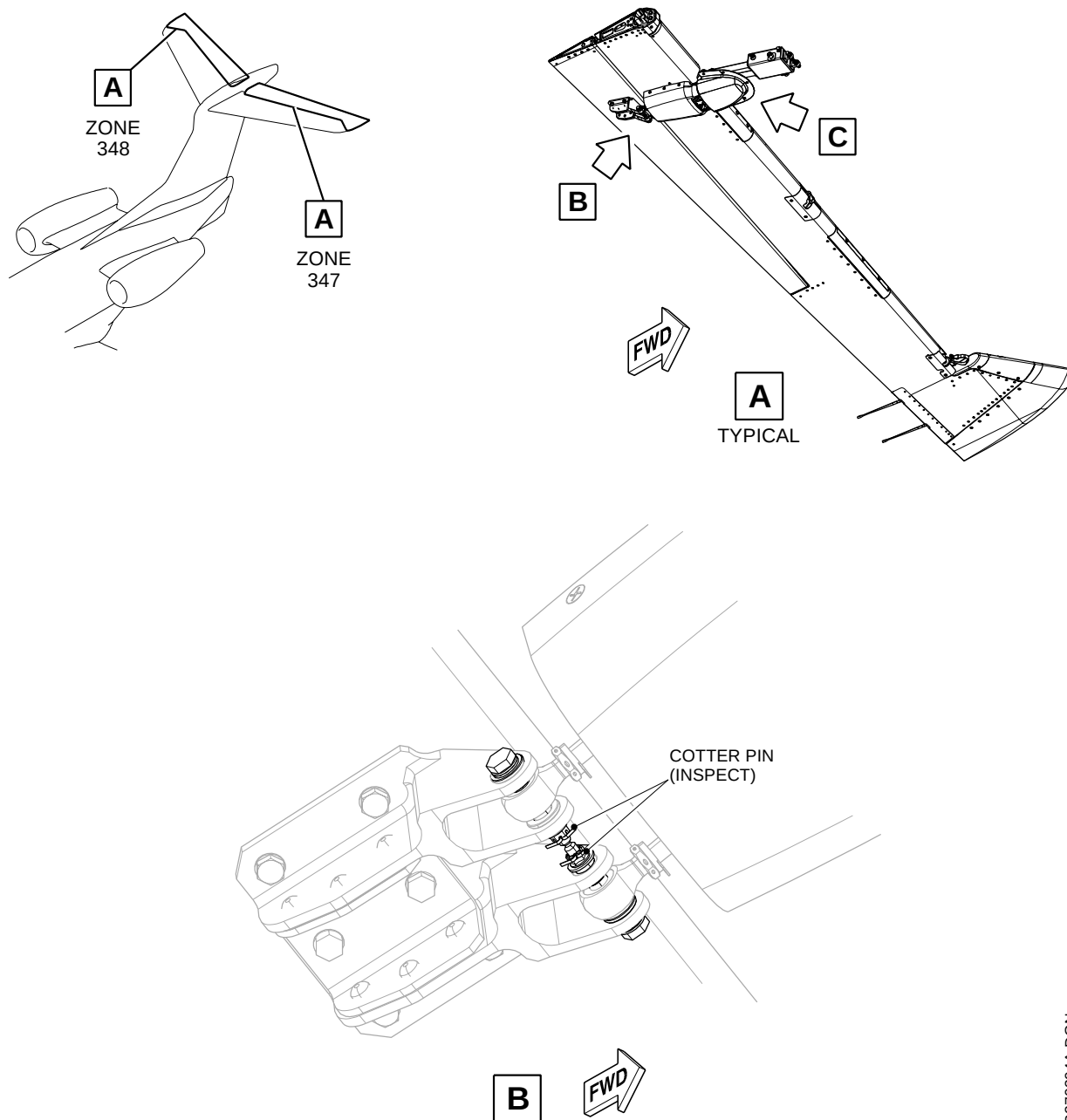
FIGURE 2 - RUDDER TRIM TAB INSPECTION
(SHEET 01 OF 02)



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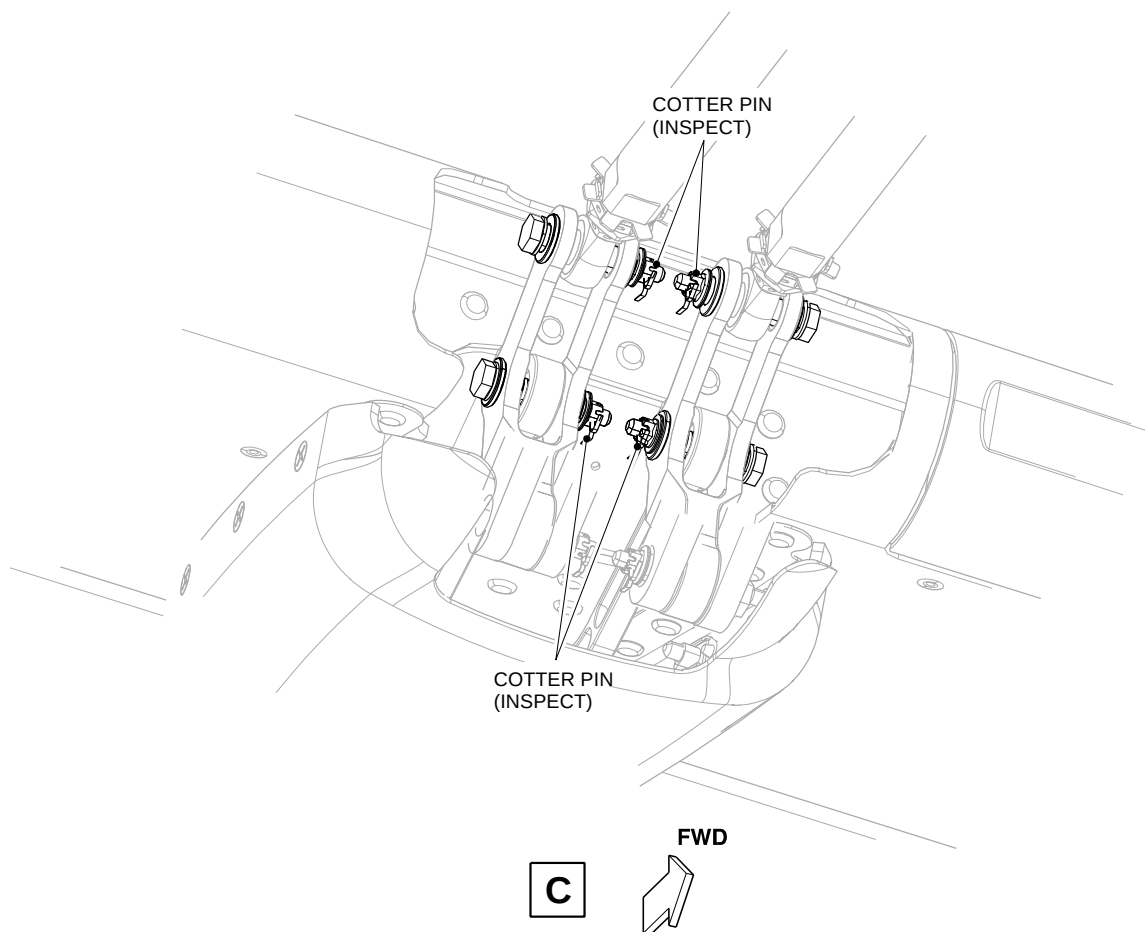
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FIGURE 3 - ELEVATOR TRIM TAB INSPECTION
(SHEET 01 OF 02)



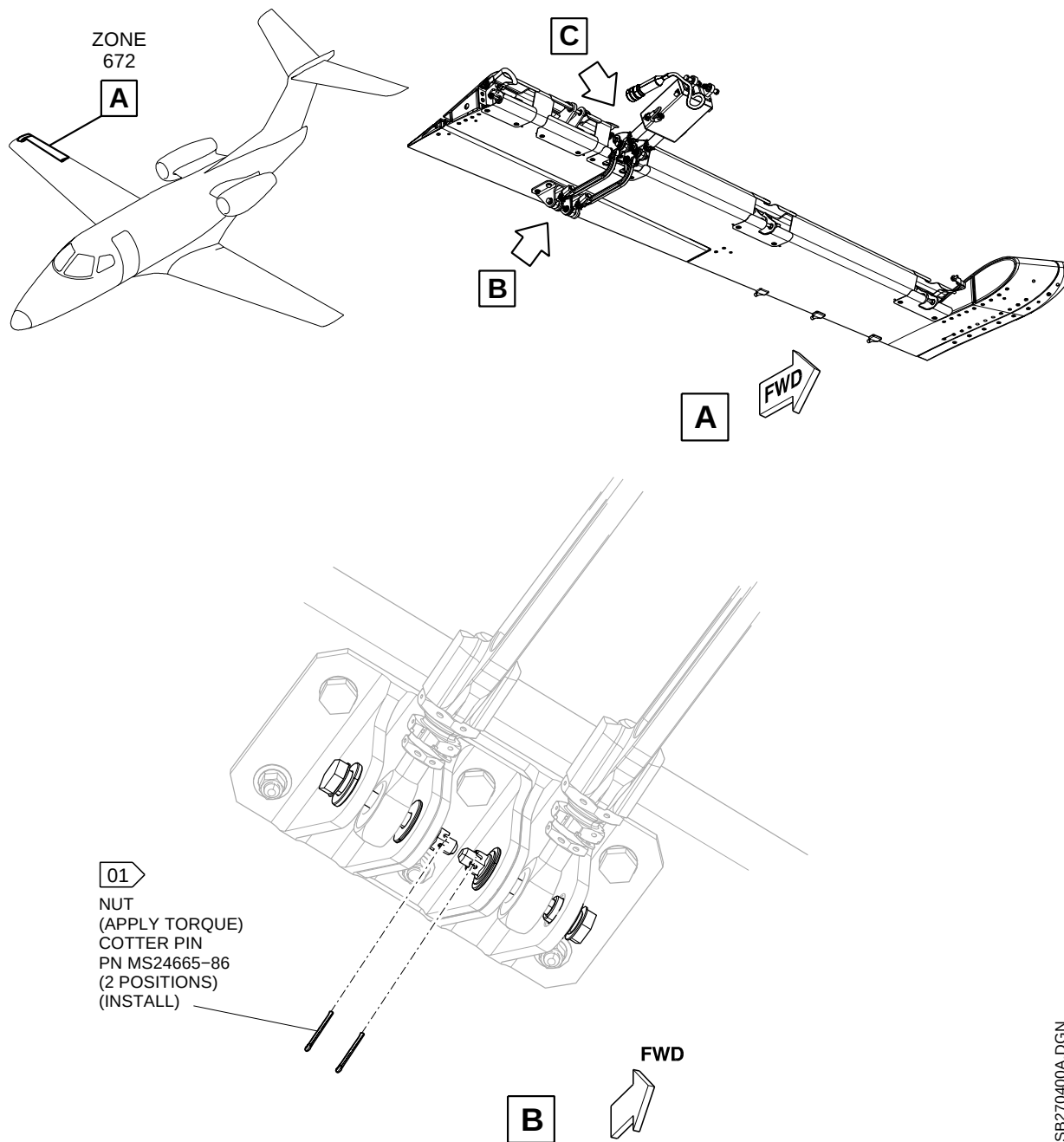
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FIGURE 3 - ELEVATOR TRIM TAB INSPECTION
(SHEET 02 OF 02)



01 APPLY TORQUE ACCORDING TO AMM TASK 27-14-03-400-801-A

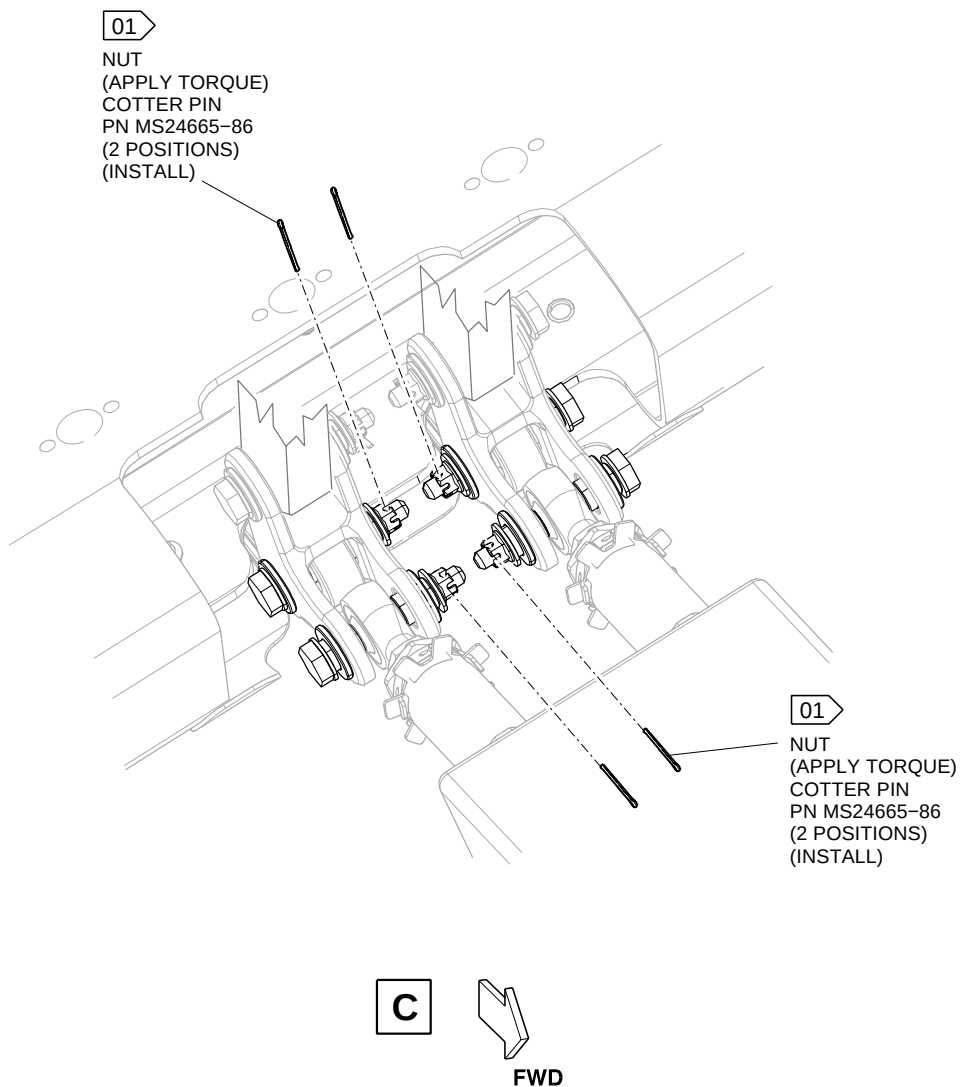
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FIGURE 4 - AILERON TRIM TAB TORQUE AND COTTER PIN INSTALLATION
(SHEET 01 OF 02)



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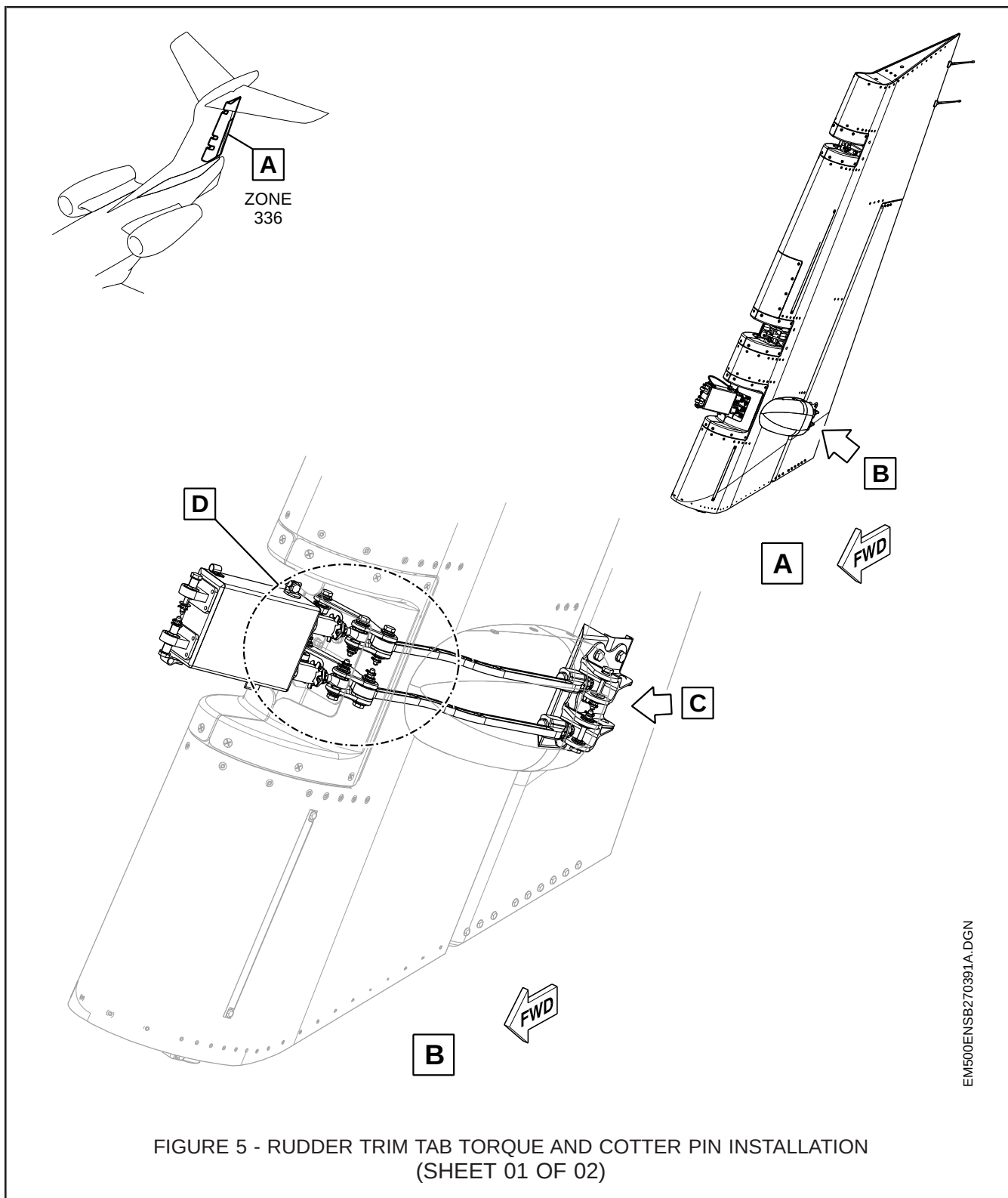
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01 APPLY TORQUE ACCORDING TO AMM TASK 27-14-02-400-801-A

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FIGURE 4 - AILERON TRIM TAB TORQUE AND COTTER PIN INSTALLATION
(SHEET 02 OF 02)



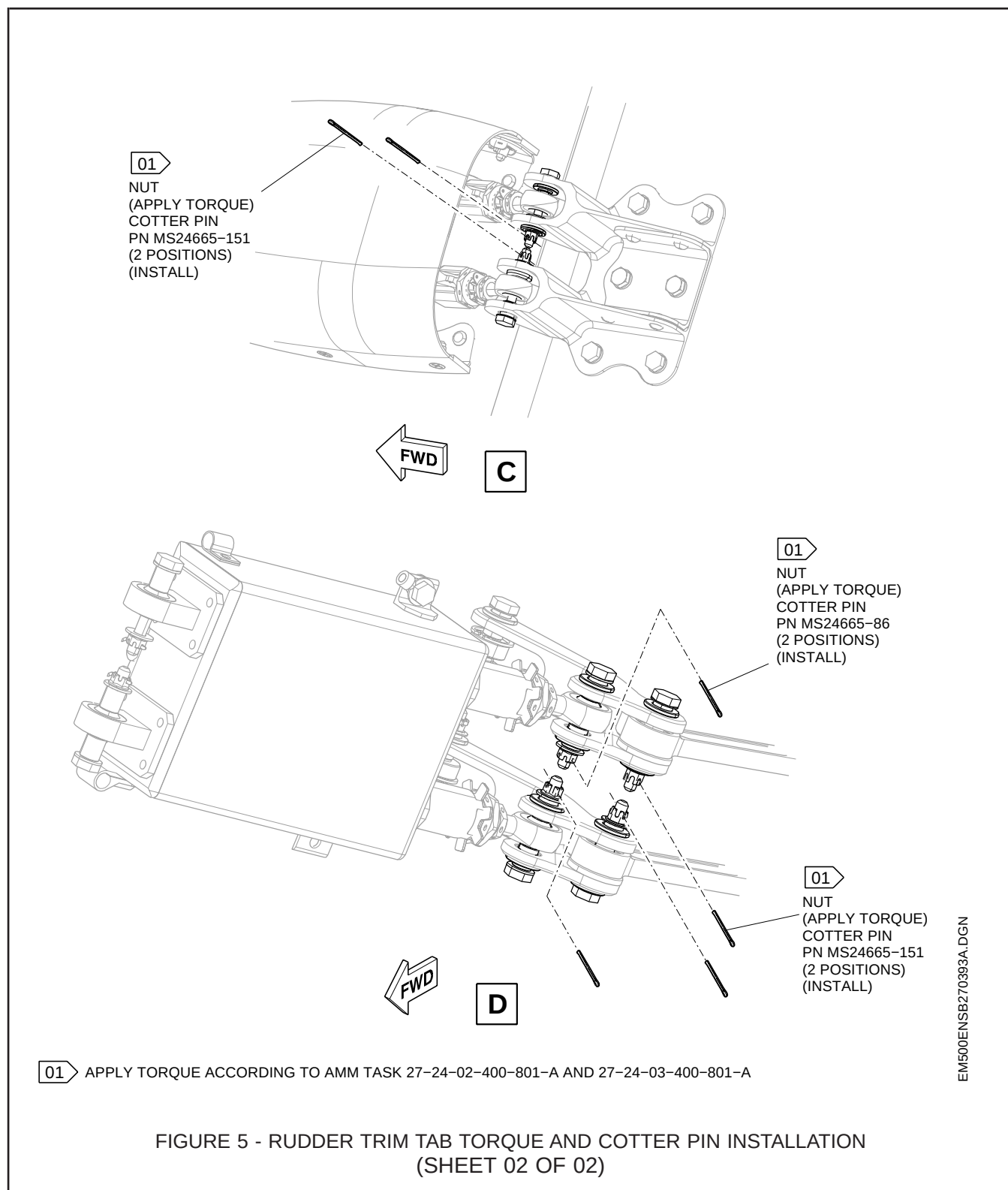
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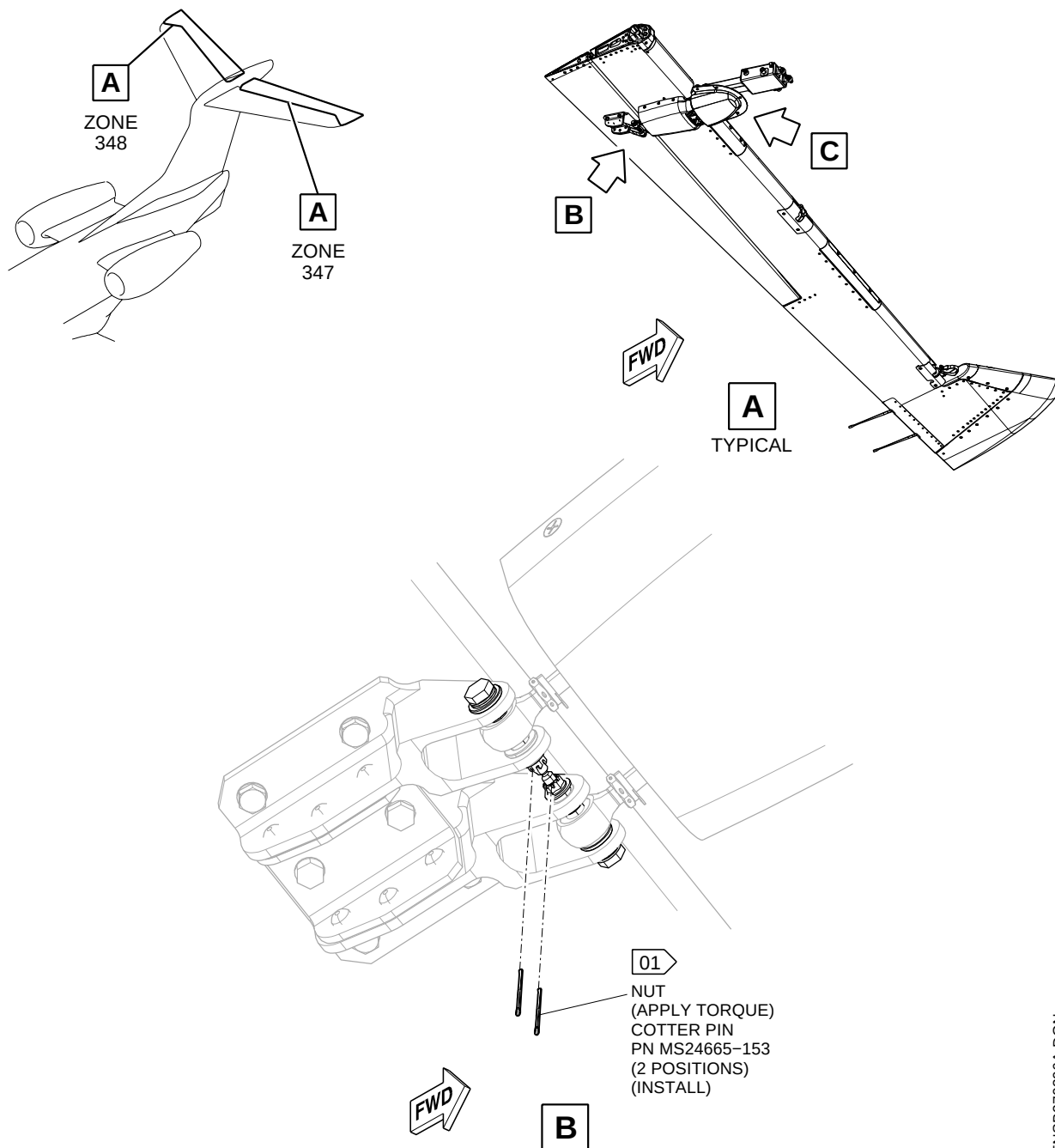
FIGURE 5 - RUDDER TRIM TAB TORQUE AND COTTER PIN INSTALLATION
(SHEET 01 OF 02)



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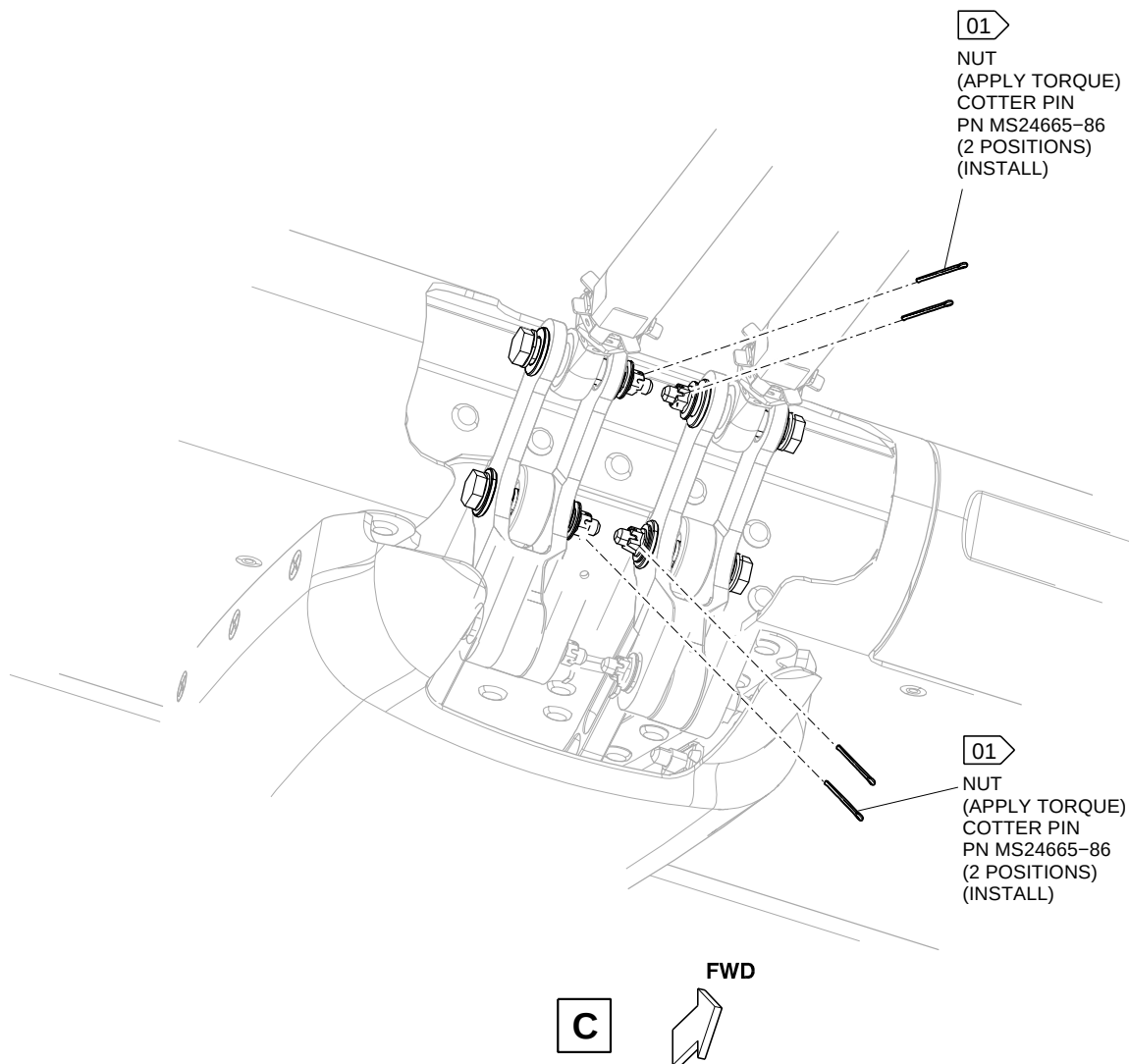




01 APPLY TORQUE ACCORDING TO AMM TASK 27-34-05-400-801-A

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FIGURE 6 - ELEVATOR TRIM TAB TORQUE AND COTTER PIN INSTALLATION
(SHEET 01 OF 02)



01 APPLY TORQUE ACCORDING TO AMM TASK 27-34-02-400-801-A

FIGURE 6 - ELEVATOR TRIM TAB TORQUE AND COTTER PIN INSTALLATION
(SHEET 02 OF 02)

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SERVICE BULLETIN IMPLEMENTATION AND EVALUATION FORM

The purpose of this form is to collect data that will be used to improve the quality of our Service Bulletins and Reliability Program.

Please fill in this form and return it to:

EMBRAER S.A.
Phenom Maintenance Support
Av. Brig. Faria Lima, 2170
SÃO JOSÉ DOS CAMPOS - SP
CEP: 12227-901 - PO Box: 36/2
BRASIL
Fax: ++ 55 12 3927-2619
e-mail: phenom.reliability@embraer.com.br

SB Number/Revision:

SB Title:

SB Implementation Report

Aircraft Serial Number or Registration Number:

Incorporation Date:

Aircraft Flight Hours:

Aircraft Landings:

SB Evaluation (Check applicable boxes bellow and use the space as required to provide any additional information)

Estimated Manpower: [] OK [] NOT OK

Material & Kits: [] OK [] NOT OK

Accomplishment Instructions: [] OK [] NOT OK

Figures: [] OK [] NOT OK

SB General Evaluation: [] OK [] NOT OK

Comments: (Bulletin quality, difficulties found at the time of incorporation, suggested improvements, other)

Company/Service Center:

E-mail:

Phone:

Address:

Form filled by:

Work Order: