Alert Service Bulletin B787-81205-SB270032-00 FLIGHT CONTROLS - Trailing Edge Flap System - Inboard and Outboard Flap Rotary Actuator Inspection

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The applicability information below is referenced at the lower left of each page to indicate the page applicability. These references are valid for this print copy only.

PM Applicability (Publication Module applicability)
787-8 and 787-9 Airplanes. Refer to Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 1., Effectivity for the list of affected airplanes.

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List of Illustrations

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

Description

Group 1-2:

Table 1 List of Illustrations - Alert Service Bulletin B787-81205-SB270032-00

ICN	Used In
ICN-B787-A-000061-A-81205-10398-A-01-1	B787-A-27-00-0032-00A-931C-D Issue 001
ICN-B787-A-000061-A-81205-10399-A-01-1	B787-A-27-00-0032-01A-933B-D Issue 001
ICN-B787-A-000061-A-81205-10400-A-01-1	B787-A-27-00-0032-02A-933B-D Issue 001

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List of Effective Data Modules

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Description

Group 1-2:

Table 1 List of Effective Data Modules - Alert Service Bulletin B787-81205-SB270032-00

Data Module – Information Name	Issue	Issue Status	Issue Date
B787-A-27-00-0032-00A-00AA-D – List of Illustrations	001	New	2015-11-03
B787-A-27-00-0032-00A-00SA-D – List of Effective Data Modules	001	New	2015-11-03
B787-A-27-00-0032-00A-931C-D – Summary	001	New	2015-11-03
B787-A-27-00-0032-00A-932A-D – PLANNING INFORMATION	001	New	2015-11-03
B787-A-27-00-0032-00A-934A-D – MATERIAL INFORMATION	001	New	2015-11-03
B787-A-27-00-0032-00A-933A-D – ACCOMPLISHMENT INSTRUCTIONS	001	New	2015-11-03
B787-A-27-00-0032-01A-933B-D – Task 1 – WING TRAILING EDGE - INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION [Group 1-2:]	001	New	2015-11-03
B787-A-27-00-0032-02A-933B-D – Task 2 – ROTARY ACTUATOR - SERVICE BULLETIN INCORPORATION MARK INSTALLATION [Group 1-2:]	001	New	2015-11-03
B787-A-27-00-0032-0AA-931D-D – Appendix A – ROTARY ACTUATOR PART NUMBERS AND SERIAL NUMBERS [Group 1-2:]	001	New	2015-11-03

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Summary

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

References

Reference	Title
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 1.B.	Spares Affected
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 8.	Weight and Balance Changes
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 9.	Electrical Load Data
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 11.	Publications Affected
SB B787-A-27-00-0032-00A-934A-D Issue 001, Paragraph 3.A.	Kits/Parts
SB B787-A-27-00-0032-00A-934A-D Issue 001, Paragraph 3.B.	Parts and Materials Supplied by the Operator
SB B787-A-27-00-0032-00A-934A-D Issue 001, Paragraph 6.	Special Tooling Necessary to do this Service Bulletin
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 1.	Effectivity
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 7.	Manpower

Description

Group 1-2:

1. CONCURRENT REQUIREMENTS

None.

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2. BACKGROUND

Accomplishment of this service bulletin will make sure the inboard and outboard flap rotary actuators were assembled correctly. Some rotary actuators may have been assembled with an incorrect no-back brake rotor-stator stack sequence during manufacturing. This incorrect assembly can cause accelerated unit wear that may eventually result in loss of no-back brake function which could lead to reduced controllability of the airplane.

This service bulletin provides instructions to inspect the inboard and outboard flaps for discrepant rotary actuators. If any discrepant rotary actuator is found, replace it with a non-discrepant rotary actuator. Or if any discrepant rotary actuator is found and has more than 4,736 flight cycles in service, do the flap no-back brake test. If the discrepant rotary actuator fails the test, replace it with a non-discrepant rotary actuator.

Boeing Service Related Problem (SRP) 787 SRP-27-0266 is related to this service bulletin.

This table is provided to operators for planning purposes only. Refer to the applicable sections for more information.

Table 1

Planning Data	Affected	Data Module Reference
Spares Affected	Yes	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 1.B., Spares Affected
AD Related	Yes	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 5., Compliance
Weight and Balance Changed	No	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 8., Weight and Balance Changes
Electrical Load Changed	No	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 9., Electrical Load Data
Publications Affected	No	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 11., Publications Affected
Airplane Flight Operations Affected (Flight Crew Operations Manual and/or FAA Approved Airplane Flight Manual)	No	Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 11., Publications Affected
Kits/Parts Required	No	Data Module SB B787-A-27-00-0032-00A-934A-D, Paragraph 3.A., Kits/Parts
Operator Supplied Parts/Material	Yes	Data Module SB B787-A-27-00-0032-00A-934A-D, Paragraph 3.B., Parts and Materials Supplied by the Operator
Special Tooling Required	No	Data Module SB B787-A-27-00-0032-00A-934A-D, Paragraph 6., Special Tooling Necessary to do this Service Bulletin

3. ACTION

(CN-AA53927A)

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Do PART 1: INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION. If any discrepant rotary actuator is found, replace it with a non-discrepant rotary actuator. Or if any discrepant rotary actuator is found and has more than 4,736 flight cycles in service, do the flap no-back brake test. If the discrepant rotary actuator fails the test, replace it with a non-discrepant rotary actuator.

4. EFFECTIVITY

787-8 and 787-9 Airplanes. Refer to Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 1., Effectivity for the list of affected airplanes.

5. COMPLIANCE

The Federal Aviation Administration (FAA) will possibly release an Airworthiness Directive related to this service bulletin. The Airworthiness Directive will make the compliance tasks and times given in this service bulletin mandatory.

Boeing recommends that the inspection and replacement given in this service bulletin be done within 60 months after the Issue 001 date of this service bulletin.

6. INDUSTRY SUPPORT INFORMATION

Boeing warranty remedies are not available for the inspection procedures given in this service bulletin.

7. MANPOWER

Refer to Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 7., Manpower.

8. MATERIAL INFORMATION

None.

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DO PART 1: INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION. IF ANY DISCREPANT ROTARY ACTUATOR IS FOUND, REPLACE IT WITH A NON-DISCREPANT ROTARY ACTUATOR. OR IF ANY DISCREPANT ROTARY ACTUATOR IS FOUND AND HAS MORE THAN 4,736 FLIGHT CYCLES IN SERVICE, DO THE FLAP NO-BACK BRAKE TEST. IF THE DISCREPANT ROTARY ACTUATOR FAILS THE TEST, REPLACE IT WITH A NON-DISCREPANT ROTARY ACTUATOR.

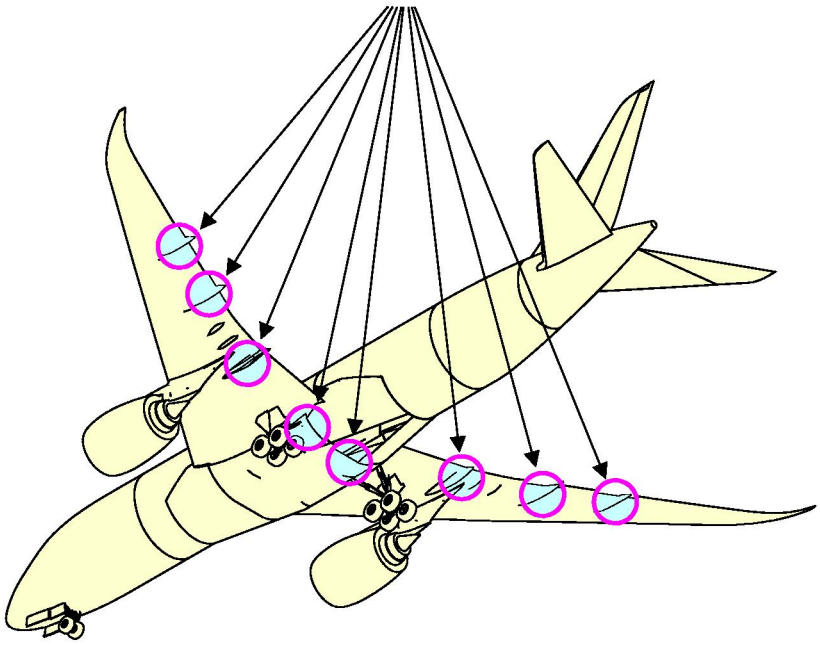

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Figure 1

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PLANNING INFORMATION

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

References

Reference	Title
SB B787-A-27-00-0032-0AA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270032-00 – Appendix A – ROTARY ACTUATOR PART NUMBERS AND SERIAL NUMBERS [Group 1-2:]
SOPM 20-50-10	APPLICATION OF STENCILS, INSIGNIA, SILK SCREEN, PART NUMBERING AND IDENTIFICATION MARKINGS
787 AMM 27-51-00	TRAILING EDGE FLAP SYSTEM
787 AMM 27-51-10	TRAILING EDGE FLAP ROTARY ACTUATOR
787 AMM 32-00-15	LANDING GEAR DOOR SAFETY
787 AMM 32-00-30	LANDING GEAR DOWNLOCK PINS
787 AMM 57-51-10	FIXED TRAILING EDGE PANELS

Description

Group 1-2:

1. Effectivity

A. Airplanes

This service bulletin is applicable to 787-8 and 787-9 Airplanes, line numbers 6-9, 11, 20-21, 23-348, 350, 352 and 354 in 2 Group(s). The Variable Numbers and Group information for the applicable airplanes is given below. Refer to CN-AA53927 for data about this change.

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Table 1

GROUP	CONFIGURATION	DESCRIPTION
1	-	787-8 and 787-9 airplanes delivered with suspect rotary actuators.
2	-	787-8 and 787-9 airplanes not delivered with suspect rotary actuators but delivered prior to the I001 release date of this service bulletin. Maintenance actions after airplane delivery may have resulted in the installation of the suspect rotary actuators identified in this service bulletin.

Airplane Models: 787-8, 787-9

Table 2

Variable Number	Group
ZA006	2
ZA100-ZA105	1
ZA116-ZA117	1
ZA118-ZA124	2
ZA135-ZA142	2
ZA152-ZA153	2
ZA175-ZA181	1
ZA182-ZA189	2
ZA195-ZA201	2
ZA215-ZA225	2
ZA230-ZA234	1
ZA235	2
ZA236-ZA238	1
ZA239-ZA250	2
ZA260-ZA262	1
ZA263-ZA265	2
ZA266	1
ZA267-ZA275	2
ZA285-ZA289	1
ZA290-ZA296	2
ZA317-ZA324	2
ZA327	2

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Table 2

Variable Number	Group
ZA334-ZA335	2
ZA341-ZA342	2
ZA380-ZA382	1
ZA383-ZA389	2
ZA430-ZA435	2
ZA436	1
ZA437-ZA439	2
ZA445-ZA448	2
ZA450	1
ZA451-ZA453	2
ZA454	1
ZA455-ZA457	2
ZA460	2
ZA461	1
ZA462	2
ZA463	1
ZA464-ZA484	2
ZA506-ZA507	1
ZA508	2
ZA509	1
ZA510	2
ZA511	1
ZA512-ZA516	2
ZA536-ZA545	2
ZA560-ZA567	2
ZA576-ZA580	2
ZA586	2
ZA588	1
ZA589-ZA593	2
ZA610-ZA617	2

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Table 2

Variable Number	Group
ZA650-ZA652	2
ZA655-ZA663	2
ZA665-ZA670	2
ZA680-ZA685	2
ZA695	2
ZA715-ZA716	2
ZA718	2
ZA740-ZA741	2
ZA768	2
ZA778-ZA779	2
ZA783-ZA784	2
ZA817-ZA827	2
ZA839	2
ZA841-ZA842	2
ZA846-ZA848	2
ZA853-ZA854	2
ZB001-ZB005	2
ZB021	2
ZB027-ZB033	2
ZB077-ZB081	2
ZB127-ZB132	2
ZB167-ZB176	2
ZB197	1
ZB198	2
ZB224-ZB227	2
ZB299	2
ZB362	2
ZB407-ZB412	2
ZB536-ZB538	2

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Table 2

Variable Number	Group
ZB558-ZB559	2
ZB611-ZB612	2

B. Spares Affected

Examine your spares supply for discrepant rotary actuators.

A discrepant rotary actuator has a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D and is not marked with "SB P689A0001-27-01 INCORPORATED", "SB P690A0001-27-01 INCORPORATED", "SB P700A0001-27-01 INCORPORATED", "SB CB10130-001 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

If any discrepant rotary actuators are found, refer to applicable Moog Service Bulletin P689A0001-27-01, P690A0001-27-01, P700A0001-27-01 or CB10130-27-01 for disposition.

2. Concurrent Requirements

None.

3. Reason

Accomplishment of this service bulletin will make sure the inboard and outboard flap rotary actuators were assembled correctly. Some rotary actuators may have been assembled with an incorrect no-back brake rotor-stator stack sequence during manufacturing. This incorrect assembly can cause accelerated unit wear that may eventually result in loss of no-back brake function which could lead to reduced controllability of the airplane.

This service bulletin provides instructions to inspect the inboard and outboard flaps for discrepant rotary actuators. If any discrepant rotary actuator is found, replace it with a non-discrepant rotary actuator. Or if any discrepant rotary actuator is found and has more than 4,736 flight cycles in service, do the flap no-back brake test. If the discrepant rotary actuator fails the test, replace it with a non-discrepant rotary actuator.

Boeing Service Related Problem (SRP) 787 SRP-27-0266 is related to this service bulletin.

4. Description

Do PART 1: INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION. If any discrepant rotary actuator is found, replace it with a non-discrepant rotary actuator. Or if any discrepant rotary actuator is found and has more than 4,736 flight cycles in service, do the flap no-back brake test. If the discrepant rotary actuator fails the test, replace it with a non-discrepant rotary actuator.

The work in this service bulletin is done in the maintenance zone(s) given below.

Table 3

Affected Maintenance Zones	
Model	**Zone**
787-8, 787-9	143, 144, 571, 574, 575, 671, 674, 675

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5. Compliance

The Federal Aviation Administration (FAA) will possibly release an Airworthiness Directive related to this service bulletin. The Airworthiness Directive will make the compliance tasks and times given in this service bulletin mandatory.

Boeing recommends that the inspection and replacement given in this service bulletin be done within 60 months after the Issue 001 date of this service bulletin.

6. Approval

This service bulletin was examined by the Federal Aviation Administration (FAA). The changes specified in this service bulletin comply with the applicable regulations and are FAA approved, as well as European Aviation Safety Agency (EASA)/Joint Aviation Authorities (JAA) approved for all EASA/JAA approved airplanes listed in the service bulletin effectivity. This service bulletin and its approval were based on the airplane in its original Boeing delivery configuration or as modified by other approved Boeing changes.

If an airplane has a non-Boeing modification or repair that affects a component or system also affected by this service bulletin, the operator is responsible for obtaining appropriate regulatory agency approval before incorporating this service bulletin.

7. Manpower

The table below shows an estimate of the task hours necessary to do this inspection for each airplane. This estimate is for direct labor only, done by an experienced crew. Adjust the estimate with operator task hour data if necessary. The estimate does not include lost time. These are some examples of lost time:

- Time to adjust to the workplace
- Time to schedule the work
- Time to inspect the work
- Time to cure the materials
- Time to make the parts
- Time to find the tools

Table 4

Task	Number of Persons	Task Hours	Elapsed Hours
Open Access	1	1.75	1.75
Task 1	1	0.80	0.80
No-Back Brake Functional Test *[1]	1	1.50 *[1]	1.50 *[1]
Task 2 *[2]	1	0.25 *[2]	0.25 *[2]
Replace *[3]	1	2.00 *[3]	2.00 *[3]
Test *[4]	3	24.00 *[4]	3.00 *[4]

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Table 4

Task	Number of Persons	Task Hours	Elapsed Hours
Close Access	1	1.75	1.75
TOTAL FOR EACH AIRPLANE *[5]		4.30 *[5]	4.30 *[5]

*[1] Add time for CONDITION 2.2 only. Multiply time given by the number of rotary actuators requiring test.

*[2] Add time for CONDITION 2.2.1 only. Multiply time given by the number of rotary actuators requiring mark.

*[3] Multiply time given by the number of rotary actuators requiring replacement.

*[4] If any rotary actuator requires replacement add time shown for test to total for each airplane.

*[5] Total for each airplane does not include time to replace rotary actuators or test, add time as required.

8. Weight and Balance Changes

None.

9. Electrical Load Data

Not changed.

10. References

A. Existing Data:

1. Change Notice CN-AA53927A
2. Aircraft Maintenance Manual (AMM) 787 AMM 27-51-00, 787 AMM 27-51-10, 787 AMM 32-00-15, 787 AMM 32-00-30, 787 AMM 57-51-10
3. Boeing Service Related Problem (SRP) 787 SRP-27-0266
4. Standard Overhaul Practices Manual (SOPM) SOPM 20-50-10
5. Moog Service Bulletin P689A0001-27-01, P690A0001-27-01, P700A0001-27-01, CB10130-27-01

B. Data Supplied with this Service Bulletin:

None.

C. Installation Requirement Modules Used in the Preparation of this Service Bulletin:

None.

11. Publications Affected

Table 5

Publication	Chapter-Section
787 Illustrated Parts Data	27-51

Damage Tolerance Based Structural Inspections:

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Boeing has evaluated the repairs and/or changes in this service bulletin for effects on Fatigue Critical Structure (FCS) and for changes to Damage Tolerance Inspections (DTI) required in the Maintenance Program. This service bulletin does not affect FCS, therefore DTIs are not necessary.

12. Interchangeability and Intermixability of Parts

Accomplishment of this service bulletin does not affect interchangeability or intermixability of parts.

13. Software Accomplishment Summary

Not Affected.

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MATERIAL INFORMATION

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

References

Reference	Title
SB B787-A-27-00-0032-0AA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270032-00 – Appendix A – ROTARY ACTUATOR PART NUMBERS AND SERIAL NUMBERS [Group 1-2:]
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 10.	References

Description

Group 1-2:

1. Material - Price and Availability

None.

2. Industry Support Information

Boeing warranty remedies are not available for the inspection given in this service bulletin.

3. Parts Necessary for Each Airplane

A. Kits/Parts:

None.

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B. Parts and Materials Supplied by the Operator:

Table 1

Part Number / Specification	QTY	Name	Notes
P689A0001-01 *[1]	As Required	Outboard Flap, Outboard Rotary Actuator	Required for each outboard flap, outboard rotary actuator that requires replacement .
P690A0001-01 *[2]	As Required	Outboard and Inboard Flap, Inboard Rotary Actuator	787-8 only. Required for each outboard and inboard flap, inboard rotary actuator that requires replacement.
CB10130-001 *[3]	As Required	Outboard and Inboard Flap, Inboard Rotary Actuator	787-9 only. Required for each outboard and inboard flap, inboard rotary actuator that requires replacement.
P700A0001-01 *[4]	As Required	Inboard Flap, Outboard Rotary Actuator	Required for each inboard flap, outboard rotary actuator that requires replacement.

*[1] That does not have a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D or is marked with "SB P689A0001-27-01 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

*[2] That does not have a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D or is marked with "SB P690A0001-27-01 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

*[3] That does not have a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D or is marked with "SB CB10130-27-01 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

*[4] That does not have a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D or is marked with "SB P700A0001-27-01 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

C. Parts Modified and Reidentified:

None.

D. Parts Removed and Not Replaced:

None.

4. Parts Necessary to Change Spares

None.

5. Special Tooling - Price and Availability

None.

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6. Special Tooling Necessary to do this Service Bulletin

No special tools or equipment are necessary to do the change in this service bulletin. But, maintenance and overhaul tools in the manuals given in Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 10., References, can be necessary. Examine operator tool supply to make sure all necessary tools are available.

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ACCOMPLISHMENT INSTRUCTIONS

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

References

Reference	Title
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 10.	References
SB B787-A-27-00-0032-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0032-02A-933B-D Issue 001	Alert Service Bulletin B787-81205-SB270032-00 – Task 2 – ROTARY ACTUATOR - SERVICE BULLETIN INCORPORATION MARK INSTALLATION [Group 1-2:]
SB B787-A-27-00-0032-01A-933B-D Issue 001	Alert Service Bulletin B787-81205-SB270032-00 – Task 1 – WING TRAILING EDGE - INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION [Group 1-2:]
SB B787-A-27-00-0032-0AA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270032-00 – Appendix A – ROTARY ACTUATOR PART NUMBERS AND SERIAL NUMBERS [Group 1-2:]
787 AMM 32-00-30	LANDING GEAR DOWNLOCK PINS
787 AMM 32-00-15	LANDING GEAR DOOR SAFETY
787 AMM 27-51-00	TRAILING EDGE FLAP SYSTEM
787 AMM 57-51-10	FIXED TRAILING EDGE PANELS
787 AMM 27-51-10	TRAILING EDGE FLAP ROTARY ACTUATOR

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Procedure

Group 1-2:

1. GENERAL INFORMATION

CAUTION: KEEP THE WORK AREA, WIRES AND ELECTRICAL BUNDLES CLEAN OF METAL PARTICLES OR CONTAMINATION WHEN YOU USE TOOLS. UNWANTED MATERIAL, METAL PARTICLES OR CONTAMINATION CAUGHT IN WIRE BUNDLES CAN CAUSE DAMAGE TO THE BUNDLES. DAMAGED WIRE BUNDLES CAN CAUSE SPARKS OR OTHER ELECTRICAL DAMAGE.

NOTE:

1. Manual titles are referred to by acronyms. Refer to Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 10., References, for definition of the acronyms.
2. Obey all of the warnings and cautions given in the specified manual sections.
3. Unless shown differently, these dimensions and tolerances are used:
   - Linear dimensions are in inches
   - Tolerance on linear dimensions, other than rivet and bolt edge margins, is plus or minus 0.03 inch
   - Tolerance on rivet and bolt edge margin is plus or minus 0.05 inch
   - Angular tolerance is plus or minus 2 degrees
   - Hole dimensions for standard solid rivets and fasteners are in SRM Chapter 51
   - Torque Values:
     - Values for structural fasteners are given in 787 Structural Repair Manual, Chapter 51.
     - Values for airframe maintenance tasks are included in Chapter 20 of 787 Aircraft Maintenance Manual (AMM).
     - Values for electrical maintenance tasks are included in Chapter 20 of Standard Wiring Practices Manual (SWPM).
     - Values for engine maintenance tasks are included in Chapter 70 of 787 Aircraft Maintenance Manual (AMM).
     - Non-standard torque values for maintenance tasks are included in the applicable installation step.
4. These work instructions refer to procedures included in other Boeing documents. When the words "refer to" are used and the operator has an accepted alternative procedure, the accepted alternative procedure can be used. When the words "in accordance with" are included in the instruction, the procedure in the Boeing document must be used.
5. The instructions in Step 2., Work Instructions and the Tasks can include operation of tools or test equipment. Boeing Engineering Tool Drawings, the Illustrated Tool and Equipment Manual, and the Special Tool and Ground Handling Drawing Index contain data on versions of the tools or test equipment that you can use. It is permitted to use replaced tools. It is not permitted to use superseded tools.
6. If it is necessary to remove more parts for access, you can remove those parts. If you can get access without removing identified parts, it is not necessary to remove all of the identified parts. Jacking and shoring limitations must be observed.
7. Use of colors in Tasks is based on guidance from the S1000D International specification for technical publications.

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8. The compliance times for the actions in Step 2., Work Instructions are in Data Module SB B787-A-27-00-0032-00A-932A-D, Paragraph 5., Compliance.

9. Some steps in the Work Instructions are labeled as Required for Compliance (RC). If this service bulletin is mandated by an Airworthiness Directive (AD), then the steps labeled as RC, including sub-steps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An Alternative Method of Compliance (AMOC) is required for any deviations to RC steps, including sub-steps and identified figures. Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC. This is provided that the RC steps, including sub-steps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

2. WORK INSTRUCTIONS

A. Access the inboard and outboard flap rotary actuators:

(1) Make sure the downlock pins are installed in the nose and main landing gear. Refer to 787 AMM 32-00-30 Landing Gear Downlock Pins - Installation as an accepted procedure.

(2) Move the door safety valve handles to the SAFE position. Refer to 787 AMM 32-00-15 Landing Gear Door - Deactivation as an accepted procedure.

(3) Deactivate the trailing edge flaps. Refer to 787 AMM 27-51-00 Trailing Edge Flap System - Deactivation as an accepted procedure.

(4) Open these access panels for the outboard flap. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

(a) 561GB - Wing Lower Fixed Trailing Edge Panel

(b) 561QB - Wing Lower Fixed Trailing Edge Panel

(c) 661GB - Wing Lower Fixed Trailing Edge Panel

(d) 661QB - Wing Lower Fixed Trailing Edge Panel

(5) Open these access panels for the inboard flap. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

(a) 552MB - Inboard TE Lower Panel

(b) 652MB - Inboard TE Lower Panel

B. RC - At each rotary actuator in Table 1, do PART 1: INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION.

Table 1 Rotary Actuator Locations

Left Wing Outboard Flap Outboard Rotary Actuator
Left Wing Outboard Flap Inboard Rotary Actuator
Left Wing Inboard Flap Outboard Rotary Actuator
Left Wing Inboard Flap Inboard Rotary Actuator

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Table 1 Rotary Actuator Locations

Right Wing Outboard Flap Outboard Rotary Actuator
Right Wing Outboard Flap Inboard Rotary Actuator
Right Wing Inboard Flap Outboard Rotary Actuator
Right Wing Inboard Flap Inboard Rotary Actuator

(1) CONDITION 1: NO DISCREPANT ROTARY ACTUATOR IS FOUND

(a) No further action required at that rotary actuator location.

(2) CONDITION 2: ANY DISCREPANT ROTARY ACTUATOR IS FOUND

(a) OPTION 1: Replace the discrepant rotary actuator with a non-discrepant rotary actuator. Refer to 787 AMM 27-51-10 as an accepted procedure.

(b) OPTION 2: Check the maintenance records to find the flight cycles in service of each discrepant rotary actuator.

1) CONDITION 2.1: THE DISCREPANT ROTARY ACTUATOR HAS 4,736 FLIGHT CYCLES OR LESS IN SERVICE

a) Replace the discrepant rotary actuator with a non-discrepant rotary actuator. Refer to 787 AMM 27-51-10 as an accepted procedure.

2) CONDITION 2.2: THE DISCREPANT ROTARY ACTUATOR HAS MORE THAN 4,736 FLIGHT CYCLES IN SERVICE

a) Do the Flap No-Back Brake Test. Refer to 787 AMM 27-51-10 as an accepted procedure.

<1> CONDITION 2.2.1: PASSES THE FLAP NO-BACK BRAKE TEST

<a> Mark the rotary actuator with service bulletin incorporation in accordance with Data Module Task 2, SB B787-A-27-00-0032-02A-933B-D.

<b> No further action required at that rotary actuator location.

<2> CONDITION 2.2.2: FAILED THE FLAP NO-BACK BRAKE TEST

<a> Replace the discrepant rotary actuator with a non-discrepant rotary actuator. Refer to 787 AMM 27-51-10 as an accepted procedure.

C. Close access:

(1) Close these access panels for the outboard flap. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

(a) 561GB - Wing Lower Fixed Trailing Edge Panel

(b) 561QB - Wing Lower Fixed Trailing Edge Panel

(c) 661GB - Wing Lower Fixed Trailing Edge Panel

(d) 661QB - Wing Lower Fixed Trailing Edge Panel

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(2) Close these access panels for the inboard flap. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

(a) 552MB - Inboard TE Lower Panel

(b) 652MB - Inboard TE Lower Panel

(3) Reactivate the trailing edge flaps. Refer to 787 AMM 27-51-00 Trailing Edge Flap System - Activation as an accepted procedure.

(4) Reactivate the landing gear doors. Refer to 787 AMM 32-00-15 Landing Gear Door - Activation as an accepted procedure.

D. Put the airplane back to a serviceable condition.

E. PART 1: INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION

(1) Inspect the inboard and outboard flaps for discrepant rotary actuators in accordance with Data Module Task 1, SB B787-A-27-00-0032-01A-933B-D. A review of the maintenance or delivery records can be used if the part number and serial number of the installed rotary actuators can be positively determined.

A discrepant rotary actuator has a part number and serial number identified in Data Module Appendix A, SB B787-A-27-00-0032-0AA-931D-D and is not marked with "SB P689A0001-27-01 INCORPORATED", "SB P690A0001-27-01 INCORPORATED", "SB P700A0001-27-01 INCORPORATED", "SB CB10130-27-01 INCORPORATED" or "B787-81205-SB270032-00 INCORPORATED".

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Task 1 – WING TRAILING EDGE - INBOARD AND OUTBOARD FLAP ROTARY ACTUATOR INSPECTION [Group 1-2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

Preliminary Requirements

Required Conditions

Action/Condition	Data Module/Technical Publication
Alert Service Bulletin B787-81205-SB270032-00 - ACCOMPLISHMENT INSTRUCTIONS	B787-A-27-00-0032-00A-933A-D Issue 001

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Procedure

This Task applies to Group 1-2:

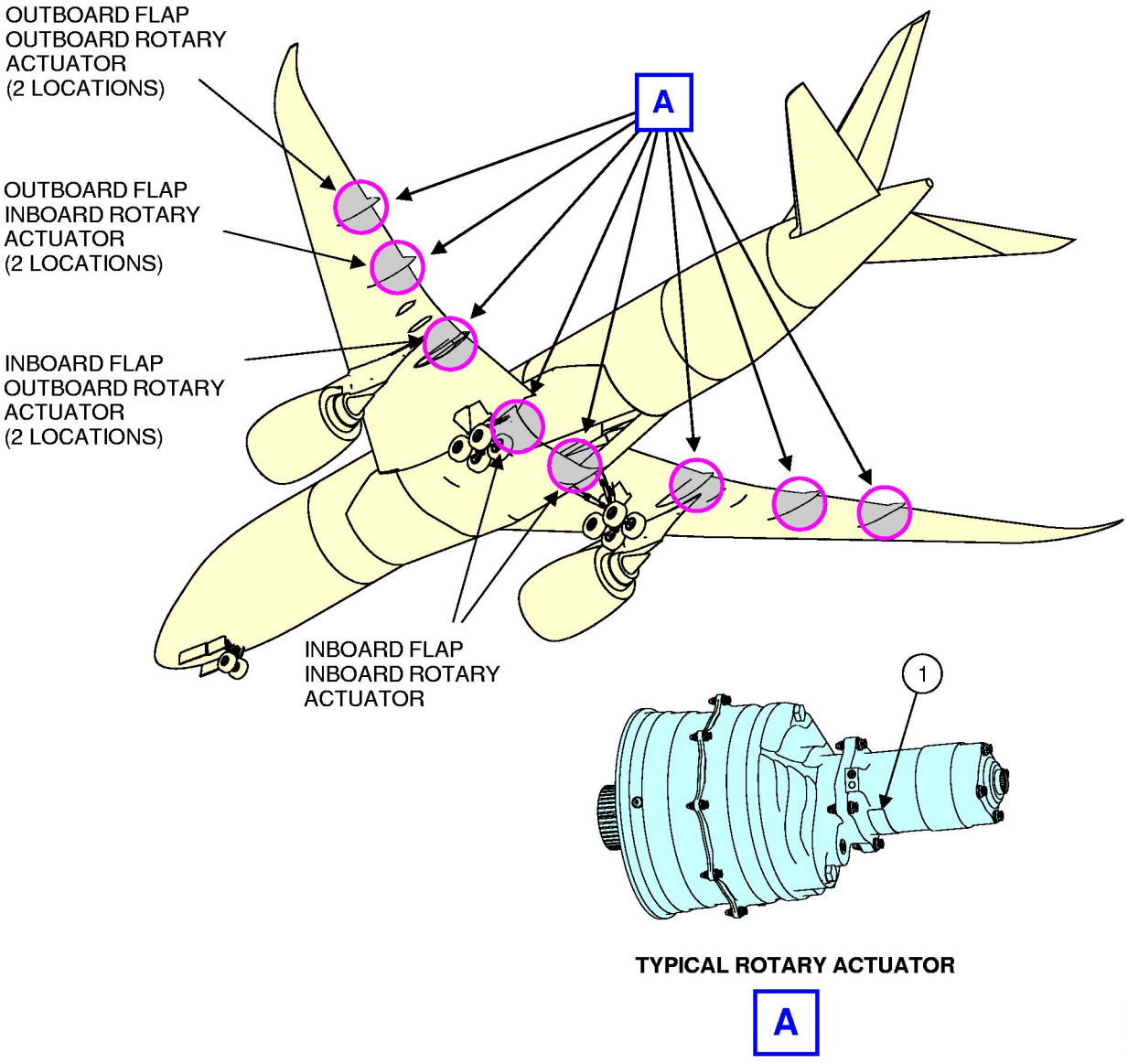

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Figure 1

1. The step numbers shown below agree with the numbers shown in the circle symbols in the Task. The QTY numbers shown below are the number of parts necessary for this Task.

Table 1

Step	Action	Name	Identification	Qty	More Data
1	Inspect	ROTARY ACTUATOR	-	8	

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Alert Service Bulletin B787-81205-SB270032-00

Task 2 – ROTARY ACTUATOR - SERVICE BULLETIN INCORPORATION MARK INSTALLATION [Group 1-2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

References

Reference	Title
SOPM 20-50-10	APPLICATION OF STENCILS, INSIGNIA, SILK SCREEN, PART NUMBERING AND IDENTIFICATION MARKINGS

Preliminary Requirements

Required Conditions

Action/Condition	Data Module/Technical Publication
Alert Service Bulletin B787-81205-SB270032-00 - ACCOMPLISHMENT INSTRUCTIONS	B787-A-27-00-0032-00A-933A-D Issue 001

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Procedure

This Task applies to Group 1-2:

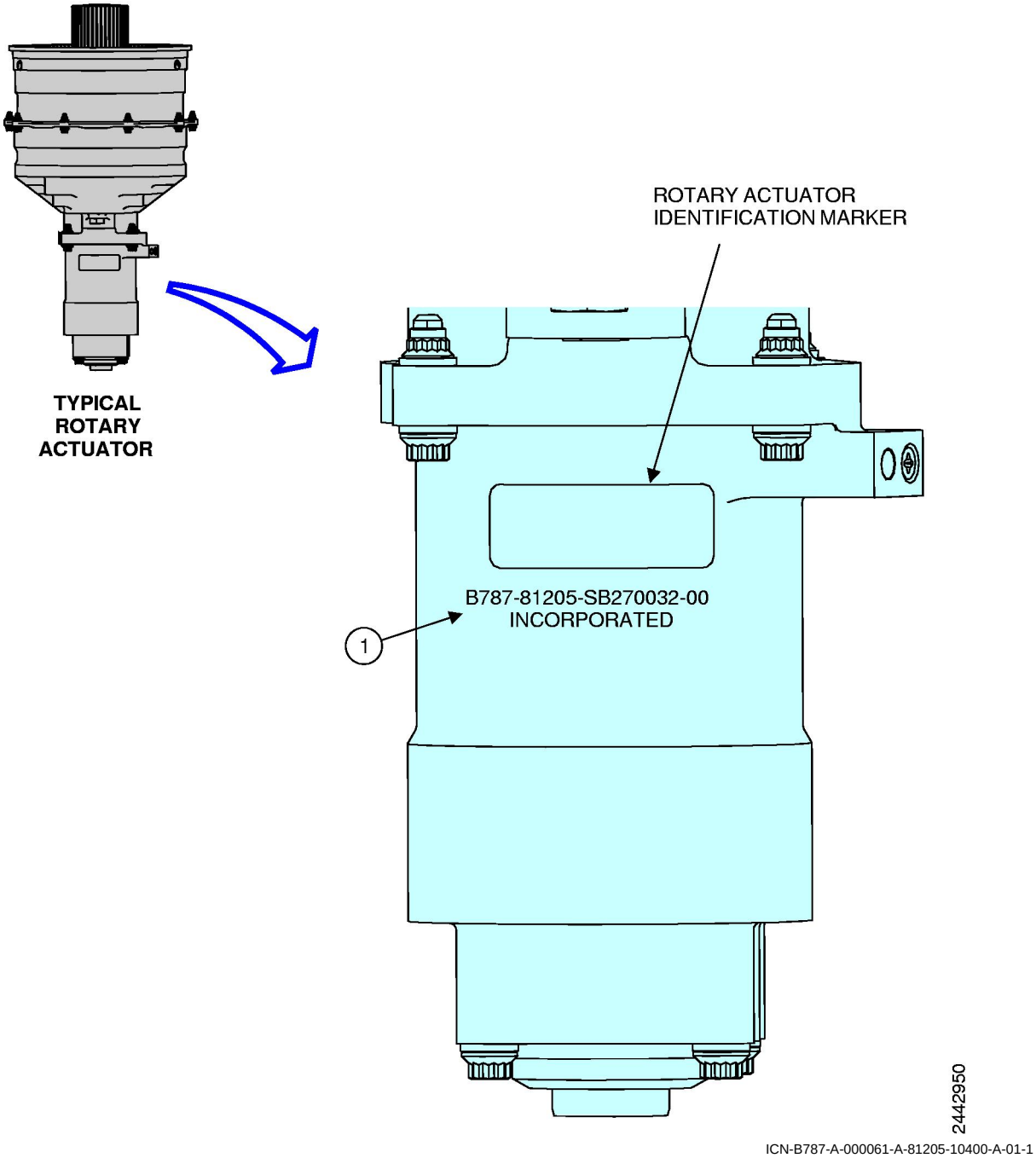

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Figure 1

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1. The step numbers shown below agree with the numbers shown in the circle symbols in the Task. The QTY numbers shown below are the number of parts necessary for this Task.

Table 1

Step	Action	Name	Identification	Qty	More Data
1	Identify	ROTARY ACTUATOR	-	1	Permanently hand mark the rotary actuator with "B787-81205-SB270032-00 INCORPORATED" and apply a clear overcoat. Refer to SOPM 20-50-10 as an accepted procedure.

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Appendix A – ROTARY ACTUATOR PART NUMBERS AND SERIAL NUMBERS [Group 1-2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0032-00A-932A-D, PARAGRAPH 1., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

Procedure

Group 1-2:

1. For rotary actuators with part number P689A0001-01, affected serial numbers are listed in Table 1.
2. For rotary actuators with part number P690A0001-01, affected serial numbers are listed in Table 2.
3. For rotary actuators with part number P700A0001-01, affected serial numbers are listed in Table 3.
4. For rotary actuators with part number CB10130-001, affected serial numbers are listed in Table 4.

Table 1 Rotary Actuator P689A0001-01

Serial Number
AAAA010P689
AAAA017P689
AAAA018P689
AAAA019P689
AAAA020P689
AAAA021P689
AAAA022P689
AAAA023P689
AAAA024P689
AAAA025P689
AAAA026P689
AAAA027P689
AAAA028P689
AAAA029P689
AAAA030P689

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Table 1 Rotary Actuator P689A0001-01

Serial Number
AAAA031P689
AAAA032P689
AAAA033P689
AAAA034P689
AAAA035P689
AAAA036P689
AAAA037P689
AAAA038P689
AAAA039P689
AAAA042P689
AAAA047P689
AAAA048P689
AAAA049P689
AAAA051P689
AAAA052P689
AAAA053P689
AAAA054P689
AAAA057P689
AAAA058P689
AAAA060P689
AAAA061P689
AAAA062P689
AAAA063P689
AAAA069P689
AAAA073P689
AAAA076P689
AAAA077P689
AAAA078P689
AAAA079P689
AAAA080P689

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Table 1 Rotary Actuator P689A0001-01

Serial Number
AAAA087P689
AAAA088P689
AAAA089P689
AAAA090P689
AAAA094P689
AAAA095P689
AAAA096P689
AAAA097P689
AAAA098P689
AAAA099P689
AAAA100P689
AAAA101P689
AAAA102P689
AAAA103P689
AAAA104P689
AAAA105P689
AAAA106P689
AAAA107P689
AAAA108P689
AAAA109P689
AAAA113P689
AAAA114P689
AAAA115P689
AAAA119P689
AAAA124P689
AAAA125P689

Table 2 Rotary Actuator P690A0001-01

Serial Number
AAAA018P690
AAAA019P690

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Table 2 Rotary Actuator P690A0001-01

Serial Number
AAAA020P690
AAAA021P690
AAAA022P690
AAAA023P690
AAAA025P690
AAAA026P690
AAAA027P690
AAAA028P690
AAAA029P690
AAAA031P690
AAAA032P690
AAAA033P690
AAAA034P690
AAAA035P690
AAAA039P690
AAAA040P690
AAAA041P690
AAAA042P690
AAAA043P690
AAAA044P690
AAAA045P690
AAAA046P690
AAAA053P690
AAAA054P690
AAAA055P690
AAAA056P690
AAAA060P690
AAAA061P690
AAAA062P690
AAAA063P690

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Table 2 Rotary Actuator P690A0001-01

Serial Number
AAAA064P690
AAAA065P690
AAAA069P690
AAAA070P690
AAAA071P690
AAAA072P690
AAAA078P690
AAAA079P690
AAAA080P690
AAAA081P690
AAAA084P690
AAAA085P690
AAAA086P690
AAAA087P690
AAAA088P690
AAAA089P690
AAAA090P690
AAAA091P690
AAAA092P690
AAAA093P690
AAAA094P690
AAAA095P690
AAAA096P690
AAAA097P690
AAAA098P690
AAAA099P690
AAAA100P690
AAAA104P690
AAAA105P690
AAAA106P690

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Table 2 Rotary Actuator P690A0001-01

Serial Number
AAAA108P690
AAAA109P690
AAAA110P690
AAAA111P690
AAAA112P690
AAAA113P690
AAAA116P690
AAAA117P690
AAAA118P690
AAAA129P690
AAAA130P690
AAAA137P690
AAAA145P690
AAAA146P690
AAAA149P690
AAAA170P690
AAAA171P690
AAAA179P690
AAAA180P690
AAAA181P690
AAAA182P690
AAAA183P690
AAAA184P690
AAAA191P690
AAAA192P690
AAAA193P690
AAAA194P690
AAAA201P690
AAAA213P690
AAAA214P690

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Table 2 Rotary Actuator P690A0001-01

Serial Number
AAAA216P690
AAAA224P690
AAAA225P690

Table 3 Rotary Actuator P700A0001-01

Serial Number
AAAA005P700
AAAA006P700
AAAA010P700
AAAA011P700
AAAA012P700
AAAA013P700
AAAA014P700
AAAA016P700
AAAA017P700
AAAA018P700
AAAA019P700
AAAA022P700
AAAA026P700
AAAA027P700
AAAA028P700
AAAA029P700
AAAA030P700
AAAA031P700
AAAA032P700
AAAA033P700
AAAA034P700
AAAA035P700
AAAA036P700
AAAA037P700
AAAA038P700

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Table 3 Rotary Actuator P700A0001-01

Serial Number
AAAA045P700
AAAA046P700
AAAA047P700
AAAA049P700
AAAA051P700
AAAA053P700
AAAA054P700
AAAA055P700
AAAA056P700
AAAA059P700
AAAA060P700
AAAA061P700
AAAA062P700
AAAA063P700
AAAA064P700
AAAA067P700
AAAA068P700
AAAA069P700
AAAA070P700
AAAA071P700
AAAA072P700
AAAA073P700
AAAA077P700
AAAA079P700
AAAA080P700
AAAA086P700
AAAA087P700
AAAA088P700
AAAA089P700
AAAA090P700

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Table 3 Rotary Actuator P700A0001-01

Serial Number
AAAA109P700
AAAA110P700
AAAA111P700
AAAA116P700
AAAA118P700
AAAA119P700
AAAA120P700
AAAA121P700
AAAA122P700
AAAA130P700

Table 4 Rotary Actuator CB10130-001

Serial Number
E0005
E0006
E0007

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