Alert Service Bulletin B787-81205-SB270026-00 FLIGHT CONTROLS - Flight Controls - Hydraulic Power Control Unit Particle Deposit Prevention - Elevator and Aileron Power Control Unit Test

Publication:	B787-81205-SB270026-00	Issue 001, 25 Nov 2014

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 Airplanes. Refer to Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 1., Effectivity for the list of affected airplanes.

Alert Service Bulletin B787-81205-SB270026-00

Table of Contents

Page

Summary . . . 7
PLANNING INFORMATION . . . 11
1. Effectivity . . . 13
A. Airplanes . . . 13
B. Spares Affected . . . 15
2. Concurrent Requirements . . . 15
3. Reason . . . 15
4. Description . . . 16
5. Compliance . . . 16
6. Approval . . . 22
7. Manpower . . . 22
8. Weight and Balance Changes . . . 25
9. Electrical Load Data . . . 26
10. References . . . 26
A. Existing Data: . . . 26
B. Data Supplied with this Service Bulletin: . . . 26
C. Installation Requirement Modules Used in the Preparation of this Service Bulletin: . . . 26
11. Publications Affected . . . 26
12. Interchangeability and Intermixability of Parts . . . 26
13. Software Accomplishment Summary . . . 26
MATERIAL INFORMATION . . . 27
1. Material - Price and Availability . . . 27
2. Industry Support Information . . . 27
3. Parts Necessary for Each Airplane . . . 27
A. Kits/Parts: . . . 27
B. Parts and Materials Supplied by the Operator: . . . 27
C. Parts Modified and Reidentified: . . . 28
D. Parts Removed and Not Replaced: . . . 28
4. Parts Necessary to Change Spares . . . 28
5. Special Tooling - Price and Availability . . . 28
6. Special Tooling Necessary to do this Service Bulletin . . . 28
ACCOMPLISHMENT INSTRUCTIONS . . . 30
1. GENERAL INFORMATION . . . 31
2. WORK INSTRUCTIONS . . . 33
Appendix A – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 5 LEFT, RIGHT AND CENTER HYDRAULIC SYSTEM FLUID MARKER INSTALLATION [Group 1-2:]. . . . 56
Appendix B – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 6 LEFT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]. . . . 59
Appendix C – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 7 RIGHT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]. . . . 62

Appendix D – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 8 CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST [Group 1, Configuration 2; Group 2:]. 65
Appendix E – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 9 WORK PACKAGE 5 AND WORK PACKAGE 6 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]. 68
Appendix F – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 10 WORK PACKAGE 7 AND WORK PACKAGE 8 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]. 71
Appendix G – TEST SCREENS [Group 1, Configuration 2; Group 2:]. 74

Alert Service Bulletin B787-81205-SB270026-00

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-27-00-0026-00A-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-SB270026-00

ICN	Used In
ICN-B787-A-000061-A-81205-09065-A-01-1	B787-A-27-00-0026-00A-931C-D Issue 001
ICN-B787-A-000061-A-81205-09066-A-01-1	B787-A-27-00-0026-0AA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09067-A-01-1	B787-A-27-00-0026-0BA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09068-A-01-1	B787-A-27-00-0026-0CA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09069-A-01-1	B787-A-27-00-0026-0DA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09070-A-01-1	B787-A-27-00-0026-0EA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09071-A-01-1	B787-A-27-00-0026-0FA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09072-A-01-1	B787-A-27-00-0026-0GA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09073-A-01-1	B787-A-27-00-0026-0GA-931D-D Issue 001
ICN-B787-A-000061-A-81205-09074-A-01-1	B787-A-27-00-0026-0GA-931D-D Issue 001

Alert Service Bulletin B787-81205-SB270026-00

List of Effective Data Modules

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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 Effective Data Modules - Alert Service Bulletin B787-81205-SB270026-00

Data Module – Information Name	Issue	Issue Status	Issue Date
B787-A-27-00-0026-00A-00AA-D – List of Illustrations	001	New	2014-11-25
B787-A-27-00-0026-00A-00SA-D – List of Effective Data Modules	001	New	2014-11-25
B787-A-27-00-0026-00A-931C-D – Summary	001	New	2014-11-25
B787-A-27-00-0026-00A-932A-D – PLANNING INFORMATION	001	New	2014-11-25
B787-A-27-00-0026-00A-934A-D – MATERIAL INFORMATION	001	New	2014-11-25
B787-A-27-00-0026-00A-933A-D – ACCOMPLISHMENT INSTRUCTIONS	001	New	2014-11-25
B787-A-27-00-0026-0AA-931D-D – Appendix A – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 5 LEFT, RIGHT AND CENTER HYDRAULIC SYSTEM FLUID MARKER INSTALLATION [Group 1-2:]	001	New	2014-11-25
B787-A-27-00-0026-0BA-931D-D – Appendix B – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 6 LEFT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25
B787-A-27-00-0026-0CA-931D-D – Appendix C – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 7 RIGHT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25
B787-A-27-00-0026-0DA-931D-D – Appendix D – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 8 CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25
B787-A-27-00-0026-0EA-931D-D – Appendix E – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 9 WORK PACKAGE 5 AND WORK PACKAGE 6 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25

Table 1 List of Effective Data Modules - Alert Service Bulletin B787-81205-SB270026-00

Data Module – Information Name	Issue	Issue Status	Issue Date
B787-A-27-00-0026-0FA-931D-D – Appendix F – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 10 WORK PACKAGE 7 AND WORK PACKAGE 8 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25
B787-A-27-00-0026-0GA-931D-D – Appendix G – TEST SCREENS [Group 1, Configuration 2; Group 2:]	001	New	2014-11-25

Alert Service Bulletin B787-81205-SB270026-00

Summary

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 1.B.	Spares Affected
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 8.	Weight and Balance Changes
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 9.	Electrical Load Data
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 11.	Publications Affected
SB B787-A-27-00-0026-00A-934A-D Issue 001, Paragraph 3.A.	Kits/Parts
SB B787-A-27-00-0026-00A-934A-D Issue 001, Paragraph 3.B.	Parts and Materials Supplied by the Operator
SB B787-A-27-00-0026-00A-934A-D Issue 001, Paragraph 6.	Special Tooling Necessary to do this Service Bulletin
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 1.	Effectivity
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 7.	Manpower
SB B787-A-27-00-0026-00A-934A-D Issue 001, Paragraph 1.	Material - Price and Availability

Reference	Title
SB B787-81205-SB290022-00 Issue 001	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test

Description

Group 1-2:

1. CONCURRENT REQUIREMENTS

Table 1 Boeing Service Bulletins Dependencies

Service Bulletin Issue	Description	Dependency Type	Note
SB B787-81205-SB290022-00 Issue 001, or later approved Issue	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation	Prerequisite	

2. BACKGROUND

787-8 operators have experienced multiple occurrences of EICAS status message FLIGHT CONTROL SYS with a correlated Power Control Unit (PCU) internal fault maintenance message. Boeing and Moog (787 actuation system supplier) determined the messages are due to the accumulation of very fine particle deposits within the PCU's Electro Hydraulic Servo Valve (EHSV) that cause degraded performance due to reduced EHSV internal hydraulic supply pressures. Failures have only occurred on airplanes that have operated with Skydrol LD-4 hydraulic fluid. Changing the hydraulic fluid to HyJet V will significantly reduce the rate of particle deposits in EHSVs. This service bulletin instructs operators to change their hydraulic fluid to HyJet V and to perform an internal flow test of the left and right elevator and aileron inboard PCUs to make sure the flow is not restricted. If the PCUs do not pass the test, replace them. If this service bulletin is not accomplished, the particle deposits can cause the flight control hydraulic PCUs to fail, which could lead to reduced controllability of the airplane.

Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

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

Table 2

Planning Data	Affected	Data Module Reference
Spares Affected	No	Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 1.B., Spares Affected
AD Related	Yes	Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance
Weight and Balance Changed	No	Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 8., Weight and Balance Changes

Table 2

Planning Data	Affected	Data Module Reference
Electrical Load Changed	No	Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 9., Electrical Load Data
Publications Affected	Yes	Data Module SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D, Paragraph 11., Publications Affected
Kits/Parts Required	Yes	Data Module SB B787-A-27-00-0026-00A-934A-D, Paragraph 3.A., Kits/Parts
Operator Supplied Parts/Material	Yes	Data Module SB B787-A-27-00-0026-00A-934A-D, Paragraph 3.B., Parts and Materials Supplied by the Operator
Special Tooling Required	Yes	Data Module SB B787-A-27-00-0026-00A-934A-D, Paragraph 6., Special Tooling Necessary to do this Service Bulletin

Boeing Service Related Problem (SRP) 787 SRP-27-0227 is related to this service bulletin.

3. ACTION

(CN-AA40116J)

Do these work packages:

1. WORK PACKAGE 1: MARKER INSTALLATION

Group 1, Configuration 2; Group 2:

2. WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST

Group 1, Configuration 2; Group 2:

3. WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST

Group 1, Configuration 2; Group 2:

4. WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST

Group 1-2:

4. EFFECTIVITY

787-8 Airplanes. Refer to Data Module SB B787-A-27-00-0026-00A-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.

Refer to Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance.

6. INDUSTRY SUPPORT INFORMATION

Boeing Industry Support information is provided in Program Letter BPL 6-1151-787-PGM-206, dated August 15, 2014. Additional copies of program letters are available from Boeing Fleet Support Contracts - Warranty.

7. MANPOWER

Refer to Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 7., Manpower.

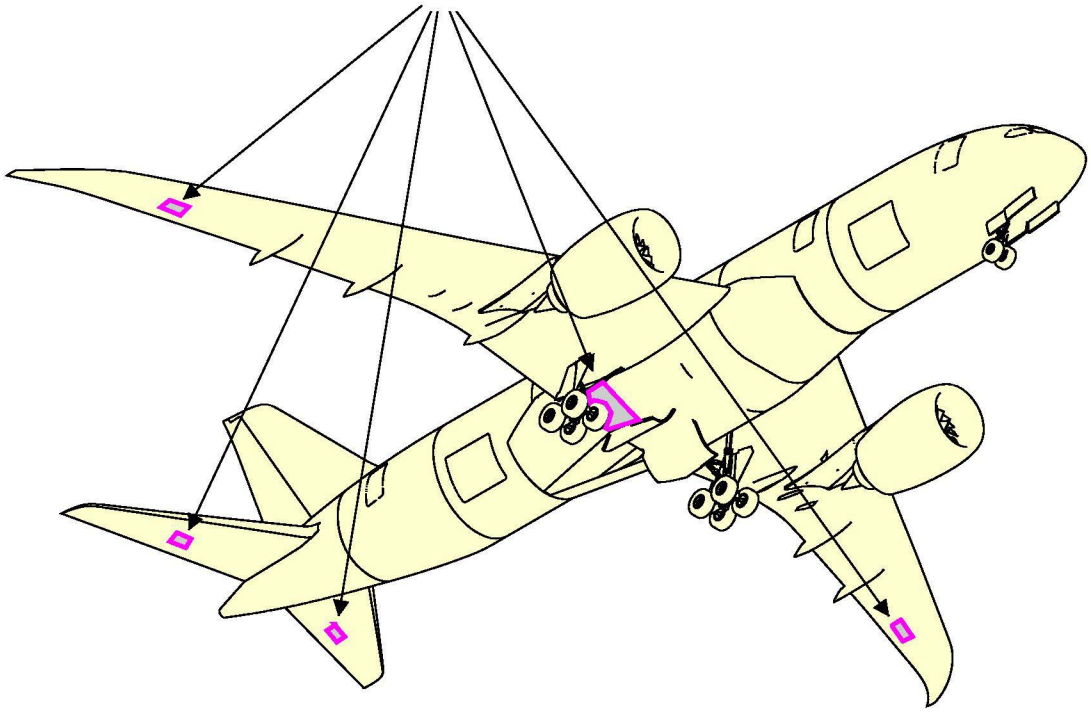
8. MATERIAL INFORMATION

Operator Supplied Parts/Materials.

Refer to Data Module SB B787-A-27-00-0026-00A-934A-D, Paragraph 1., Material - Price and Availability.

ALL AIRPLANES:
DO WORK PACKAGE 1: MARKER INSTALLATION

GROUP 1, CONFIGURATION 2; GROUP 2
DO THESE WORK PACKAGES:
WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST
WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST
WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST



ICN-B787-A-000061-A-81205-09065-A-01-1

Figure 1

Alert Service Bulletin B787-81205-SB270026-00

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-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions
SB B787-A-27-00-0026-0AA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix A – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 5 LEFT, RIGHT AND CENTER HYDRAULIC SYSTEM FLUID MARKER INSTALLATION [Group 1-2:]
SB B787-A-27-00-0026-0BA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix B – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 6 LEFT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]
SB B787-A-27-00-0026-0CA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix C – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 7 RIGHT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]
SB B787-A-27-00-0026-0DA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix D – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 8 CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST [Group 1, Configuration 2; Group 2:]
SB B787-A-27-00-0026-0EA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix E – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 9 WORK PACKAGE 5 AND WORK

Reference	Title
	PACKAGE 6 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]
SB B787-A-27-00-0026-0FA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix F – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 10 WORK PACKAGE 7 AND WORK PACKAGE 8 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]
SB B787-81205-SB290022-00 Issue 001	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test
787 AMM 07-11-01	JACKING
787 AMM 12-12-01	HYDRAULIC SYSTEMS
787 AMM 20-10-09	TUBE
787 AMM 27-02-00	PRIMARY FLIGHT CONTROL FUNCTION
787 AMM 27-11-19	AILERON POWER CONTROL UNIT
787 AMM 27-31-09	ELEVATOR POWER CONTROL UNIT
787 AMM 29-11-00	HYDRAULIC SYSTEM
787 AMM 29-21-00	RAM AIR TURBINE SYSTEM
787 AMM 32-00-15	LANDING GEAR DOOR SAFETY
787 AMM 32-00-30	LANDING GEAR DOWNLOCK PINS
787 AMM 45-11-00	CENTRAL MAINTENANCE COMPUTING FUNCTION
787 AMM 55-16-01	HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS
787 AMM 57-51-10	FIXED TRAILING EDGE PANELS
SB B787-81205-SB290010-00	HYDRAULIC POWER - Main - Hydraulic Fluid Replacement
SB B787-81205-SB290022-00	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation

Description

Group 1-2:

1. Effectivity

A. Airplanes

This service bulletin is applicable to 787-8 Airplanes, line numbers 4-9, 20-21 and 23-190 in 2 Group(s). The Variable Numbers and Group information for the applicable airplanes is given below. An equivalent change is on subsequent production airplanes. Refer to CN-AA40116 for data about this change.

Table 1

GROUP	CONFIGURATION	DESCRIPTION
1	-	Airplanes delivered with HyJet V hydraulic fluid.
	1	Airplanes that have only been serviced with HyJet V.
	2	Airplanes that have been serviced with hydraulic fluids other than HyJet V or hydraulic fluid used during system servicing cannot be determined.
2	-	Airplanes delivered with Skydrol LD-4.
	1	Airplanes that have accomplished Boeing service bulletin B787-81205-SB29-0010-00 Issue 001 to replace the hydraulic fluid with HyJet V.
	2	Airplanes that have not accomplished Boeing service bulletin B787-81205-SB29-0010-00 Issue 001 to replace the hydraulic fluid with HyJet V.

Airplane Models: 787-8

Table 2

Variable Number	Group
ZA004-ZA006	1
ZA100-ZA105	2
ZA116-ZA120	2
ZA121-ZA124	1
ZA135	2
ZA136	1
ZA175-ZA176	1
ZA177-ZA185	2
ZA186-ZA189	1
ZA215-ZA220	1
ZA230-ZA232	1

Table 2

Variable Number	Group
ZA233	2
ZA234-ZA235	1
ZA236-ZA241	2
ZA242-ZA245	1
ZA260	1
ZA261-ZA264	2
ZA265-ZA267	1
ZA270-ZA273	2
ZA274-ZA275	1
ZA285-ZA290	2
ZA291-ZA295	1
ZA317-ZA319	2
ZA320	1
ZA327	1
ZA334	1
ZA380	2
ZA381-ZA383	1
ZA384	2
ZA385-ZA389	1
ZA430	1
ZA431	2
ZA432-ZA437	1
ZA445-ZA448	1
ZA450-ZA451	2
ZA452-ZA456	1
ZA460-ZA465	2
ZA466-ZA474	1
ZA506-ZA513	2
ZA514-ZA516	1
ZA536-ZA538	2

Table 2

Variable Number	Group
ZA539-ZA541	1
ZA560-ZA565	1
ZA576	2
ZA577-ZA580	1
ZA586	1
ZA588	1
ZA610-ZA612	1
ZA650-ZA651	1
ZA655-ZA656	1
ZA778	1

B. Spares Affected

None.

2. Concurrent Requirements

Table 3 Boeing Service Bulletins Dependencies

Service Bulletin Issue	Description	Dependency Type	Note
SB B787-81205-SB290022-00 Issue 001, or later approved Issue	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation	Prerequisite	

3. Reason

787-8 operators have experienced multiple occurrences of EICAS status message FLIGHT CONTROL SYS with a correlated Power Control Unit (PCU) internal fault maintenance message. Boeing and Moog (787 actuation system supplier) determined the messages are due to the accumulation of very fine particle deposits within the PCU's Electro Hydraulic Servo Valve (EHSV) that cause degraded performance due to reduced EHSV internal hydraulic supply pressures. Failures have only occurred on airplanes that have operated with Skydrol LD-4 hydraulic fluid. Changing the hydraulic fluid to HyJet V will significantly reduce the rate of particle deposits in EHSVs. This service bulletin instructs operators to change their hydraulic fluid to HyJet V and to perform an internal flow test of the left and right elevator and aileron inboard PCUs to make sure the flow is not restricted. If the PCUs do not pass the test, replace them. If this service bulletin is not accomplished, the particle deposits can cause the flight control hydraulic PCUs to fail, which could lead to reduced controllability of the airplane.

Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

Boeing Service Related Problem (SRP) 787 SRP-27-0227 is related to this service bulletin.

4. Description

Do these work packages:

1. WORK PACKAGE 1: MARKER INSTALLATION

Group 1, Configuration 2; Group 2:

2. WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST

Group 1, Configuration 2; Group 2:

3. WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST

Group 1, Configuration 2; Group 2:

4. WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST

Group 1-2:

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

Table 4

Affected Maintenance Zones	
Model	**Zone**
787-8	197, 335, 336, 345, 346, 434, 444, 561, 567, 661, 667

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.

Do the required actions in accordance with Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions.

When more than one OPTION is given for a CONDITION, do only one of the OPTION numbers. When more than one ACTION is given for a CONDITION number or an OPTION number, do all of the ACTION numbers for that CONDITION number or OPTION number.

Logic diagrams showing compliance tasks and compliance times are included as an aid in Data Module Appendix A, SB B787-A-27-00-0026-0AA-931D-D, Data Module Appendix B, SB B787-A-27-00-0026-0BA-931D-D, Data Module Appendix C, SB B787-A-27-00-0026-0CA-931D-D, Data Module Appendix D, SB B787-A-27-00-0026-0DA-931D-D, Data Module Appendix E, SB B787-A-27-00-0026-0EA-931D-D and Data Module Appendix F, SB B787-A-27-00-0026-0FA-931D-D.

Table 5 Left, Right and Center Hydraulic System Fluid Marker Installation

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
All Airplanes	Do WORK PACKAGE 1: MARKER INSTALLATION. *[1] *[2]	Within 36 months after the Issue 001 date of this service bulletin.	-

*[1] No further action required for Group 1, Configuration 1 after WORK PACKAGE 1 is done. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

*[2] No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Tables 5, 6, 7 and 8. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

Group 1, Configuration 2; Group 2:

Table 6 Left Hydraulic System Fluid Test

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
All Airplanes	Do WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST. *[1]	Within 36 months after the Issue 001 date of this service bulletin.	-
CONDITION 1: PASSES THE HYDRAULIC FLUID TEST	No further action required for WORK PACKAGE 2. *[2]	-	-
CONDITION 2: DOES NOT PASS THE HYDRAULIC FLUID TEST	CONDITION 2 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 2 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 1 is met.	Within 36 months after the Issue 001 date of this service bulletin. *[3]	-

*[1] It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

*[2] No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Tables 5, 6, 7 and 8. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

*[3] CONDITION 2 (ACTION 2) can be done any time between CONDITION 2 (ACTION 1) and the Compliance Time.

Group 1, Configuration 2; Group 2:

Table 7 Right Hydraulic System Fluid Test

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
All Airplanes	Do WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST. *[1]	Within 36 months after the Issue 001 date of this service bulletin.	-
CONDITION 3: PASSES THE HYDRAULIC FLUID TEST	No further action required for WORK PACKAGE 3. *[2]	-	-
CONDITION 4: DOES NOT PASS THE HYDRAULIC FLUID TEST	CONDITION 4 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 4 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 3 is met.	Within 36 months after the Issue 001 date of this service bulletin. *[3]	-

*[1] It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

*[2] No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Tables 5, 6 7 and 8. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

*[3] CONDITION 4 (ACTION 2) can be done any time between CONDITION 4 (ACTION 1) and the Compliance Time.

Group 1, Configuration 2; Group 2:

Table 8 Center Hydraulic System Fluid Test and Left and Right Elevator and Aileron Power Control Unit Internal Flow Test

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
All Airplanes	Do WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST. *[1]	Within 36 months after the Issue 001 date of this service bulletin.	-
CONDITION 5: PASSES THE HYDRAULIC FLUID TEST *[2]	CONDITION 5 (ACTION 1): Do WORK PACKAGE 5: LEFT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST. *[3] *[4] *[5]	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 5 (ACTION 2): Do WORK PACKAGE 6: RIGHT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST. *[3] *[4] *[5]	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 5 (ACTION 3): Do WORK PACKAGE 7: LEFT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST. *[3] *[4] *[6]	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 5 (ACTION 4): Do WORK PACKAGE 8: RIGHT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST. *[3] *[4] *[6]	Within 36 months after the Issue 001 date of this service bulletin.	
CONDITION 6: DOES NOT PASS THE HYDRAULIC FLUID TEST	CONDITION 6 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.	Within 36 months after the Issue 001 date of this service bulletin.	-
	CONDITION 6 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 5 is met.	Within 36 months after the Issue 001 date of this service bulletin. *[7]	-

*[1] It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

*[2] CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) can be done in any sequence. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service after each action independently.

Table 8 Center Hydraulic System Fluid Test and Left and Right Elevator and Aileron Power Control Unit Internal Flow Test

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)

*[3] No further action required for WORK PACKAGE 4 after CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) are done.

*[4] No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Tables 5, 6, 7 and 8. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00.

*[5] See table 9 for disposition of WORK PACKAGE 5 and WORK PACKAGE 6 conditions and actions.

*[6] See table 10 for disposition of WORK PACKAGE 7 and WORK PACKAGE 8 conditions and actions.

*[7] CONDITION 6 (ACTION 2) can be done any time between CONDITION 6 (ACTION 1) and the Compliance Time.

Group 1, Configuration 2; Group 2:

The Conditions, Actions and Compliance times shown in Table 9 apply to each WORK PACKAGE, 5 and 6, independently.

Group 1, Configuration 2; Group 2:

Table 9 WORK PACKAGE 5 and WORK PACKAGE 6 Conditions and Actions

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
CONDITION 5.1: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE	No further action required for the applicable work package.	-	-
CONDITION 5.2: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE	OPTION 1: Do PART 5: ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.	Within 36 months after the Issue 001 date of this service bulletin.	-
	OPTION 2: Do PART 7: REPLACE THE POWER CONTROL UNIT. No further action required for the applicable work package.	Within 36 months after the Issue 001 date of this service bulletin.	-

Table 9 WORK PACKAGE 5 and WORK PACKAGE 6 Conditions and Actions

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
CONDITION 5.2.1: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.560 GALLONS PER MINUTE	No further action required for the applicable work package.	-	-
CONDITION 5.2.2: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.560 GALLONS PER MINUTE	Do PART 7: REPLACE THE POWER CONTROL UNIT. No further action required for the applicable work package.	Within 36 months after the Issue 001 date of this service bulletin.	-

Group 1, Configuration 2; Group 2:

The Conditions, Actions and Compliance times shown in Table 10 apply to apply to each WORK PACKAGE, 7 and 8, independently.

Group 1, Configuration 2; Group 2:

Table 10 WORK PACKAGE 7 and WORK PACKAGE 8 Conditions and Actions

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
CONDITION 5.3: THE AILERON INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE	No further action required for the applicable work package.	-	-
CONDITION 5.4: THE AILERON INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE	OPTION 3: Do PART 6: AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.	Within 36 months after the Issue 001 date of this service bulletin.	-
	OPTION 4: Do PART 7: REPLACE THE POWER CONTROL UNIT. No further action required for the applicable work package.	Within 36 months after the Issue 001 date of this service bulletin.	-

Table 10 WORK PACKAGE 7 and WORK PACKAGE 8 Conditions and Actions

Condition	Action	Compliance Time	Repeat Interval (Not to Exceed)
CONDITION 5.4.1: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.297 GALLONS PER MINUTE	No further action required for the applicable work package.	-	-
CONDITION 5.4.2: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.297 GALLONS PER MINUTE	Do PART 7: REPLACE THE POWER CONTROL UNIT. No further action required for the applicable work package.	Within 36 months after the Issue 001 date of this service bulletin.	-

Group 1-2:

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 change 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 11 WORK PACKAGE 1: MARKER INSTALLATION

Task	Number of Persons	Task Hours	Elapsed Hours
Install markers in accordance with SB B787-81205-SB290022-00 Issue 001 or later approved Issue.	*[1]	*[1]	*[1]
TOTAL FOR EACH AIRPLANE		*[1] *[2]	*[1] *[2]

*[1] Refer to SB B787-81205-SB290022-00 Issue 001 or later approved issue.

*[2] Task Hours and Elapsed Hours do not include the time to find airplane configuration.

WORK PACKAGE 1 must be done first or at the same time as WORK PACKAGE 2, WORK PACKAGE 3 or WORK PACKAGE 4.

Group 1, Configuration 2; Group 2:

Table 12 WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 1 *[1]	3	13.50 *[1]	4.50 *[1]
PART 2 *[1]	2	3.00 *[1]	1.50 *[1]
PART 3	2	1.00	0.50
PART 4 *[2]	3	13.50 *[2]	4.50 *[2]
TOTAL FOR EACH AIRPLANE		1.00	0.50

*[1] Add Task Hours and Elapsed Hours for Group 2, Configuration 2.

*[2] Add Task Hours and Elapsed Hours for CONDITION 2.

Group 1, Configuration 2; Group 2:

Table 13 WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 1 *[1]	3	13.50 *[1]	4.50 *[1]
PART 2 *[1]	2 *[1]	3.00 *[1]	1.50 *[1]
PART 3	2	1.00	0.50
PART 4 *[2]	3	13.50 *[2]	4.50 *[2]
TOTAL FOR EACH AIRPLANE		1.00	0.50

*[1] Add Task Hours and Elapsed Hours for Group 2, Configuration 2.

*[2] Add Task Hours and Elapsed Hours for CONDITION 4.

Group 1, Configuration 2; Group 2:

Table 14 WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 1 *[1]	3	16.50 *[1]	5.50 *[1]
PART 2 *[1]	2	7.50 *[1]	3.75 *[1]
PART 3	2	1.00	0.50
PART 4 *[2]	3	16.50 *[2]	5.50 *[2]
WORK PACKAGE 5 *[3]		*[3]	*[3]
WORK PACKAGE 6 *[3]		*[3]	*[3]
WORK PACKAGE 7 *[3]		*[3]	*[3]
WORK PACKAGE 8 *[3]		*[3]	*[3]
TOTAL FOR AIRPLANE		1.00 *[3]	0.50 *[3]

*[1] Add Task Hours and Elapsed Hours for Group 2, Configuration 2.

*[2] Add Task Hours and Elapsed Hours for CONDITION 6.

*[3] See Tables 15 thru 18. Add Task Hours and Elapsed Hours for WORK PACKAGE 5 thru WORK PACKAGE 8.

Group 1, Configuration 2; Group 2:

Table 15 WORK PACKAGE 5: LEFT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 5 *[1]	2	4.00 *[1]	2.00 *[1]
PART 7 *[2]	2	29.00 *[2]	14.50 *[2]
TOTAL FOR AIRPLANE		*[3]	*[3]

*[1] Add Task Hours and Elapsed Hours for OPTION 1.

*[2] Add Task Hours and Elapsed Hours for CONDITION 5.2.2 or OPTION 2.

*[3] Task Hours and Elapsed Hours do not include the time to find power control unit time in service.

Group 1, Configuration 2; Group 2:

Table 16 WORK PACKAGE 6: RIGHT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 5 *[1]	2	4.00 *[1]	2.00 *[1]
PART 7 *[2]	2	29.00 *[2]	14.50 *[2]
TOTAL FOR AIRPLANE		*[3]	*[3]

*[1] Add Task Hours and Elapsed Hours for OPTION 1.

*[2] Add Task Hours and Elapsed Hours for CONDITION 5.2.2 or OPTION 2.

*[3] Task Hours and Elapsed Hours do not include the time to find power control unit time in service.

Group 1, Configuration 2; Group 2:

Table 17 WORK PACKAGE 7: LEFT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 6 *[1]	2	4.00 *[1]	2.00 *[1]
PART 7 *[2]	2	29.00 *[2]	14.50 *[2]
TOTAL FOR AIRPLANE		*[3]	*[3]

*[1] Add Task Hours and Elapsed Hours for OPTION 3.

*[2] Add Task Hours and Elapsed Hours for CONDITION 5.4.2 or OPTION 4.

*[3] Task Hours and Elapsed Hours do not include the time to find power control unit time in service.

Group 1, Configuration 2; Group 2:

Table 18 WORK PACKAGE 8: RIGHT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

Task	Number of Persons	Task Hours	Elapsed Hours
PART 6 *[1]	2	4.00 *[1]	2.00 *[1]
PART 7 *[2]	2	29.00 *[2]	14.50 *[2]
TOTAL FOR AIRPLANE		*[3]	*[3]

*[1] Add Task Hours and Elapsed Hours for OPTION 3.

*[2] Add Task Hours and Elapsed Hours for CONDITION 5.4.2 or OPTION 4.

*[3] Task Hours and Elapsed Hours do not include the time to find power control unit time in service.

Group 1-2:

8. Weight and Balance Changes

None.

9. Electrical Load Data

Not changed.

10. References

A. Existing Data:

1. Change Notice CN-AA40116J
2. Aircraft Maintenance Manual (AMM) 787 AMM 07-11-01, 787 AMM 12-12-01, 787 AMM 20-10-09, 787 AMM 27-02-00, 787 AMM 27-11-19, 787 AMM 27-31-09, 787 AMM 29-11-00, 787 AMM 29-21-00, 787 AMM 32-00-15, 787 AMM 32-00-30, 787 AMM 45-11-00, 787 AMM 55-16-01, 787 AMM 57-51-10
3. Boeing Program Letter (BPL) BPL 6-1151-787-PGM-206, dated August 15, 2014
4. Boeing Service Bulletin (SB) SB B787-81205-SB270016-00, SB B787-81205-SB290010-00, SB B787-81205-SB290022-00
5. Boeing Service Related Problem (SRP) 787 SRP-27-0227

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 19

Publication	Chapter-Section
787 Maintenance Manual	12-12, 20-10, 27-51, 27-81, 29-11, 29-18, 29-21, 29-31, 29-32, 32-32, 32-34, 32-35, 32-51, 54-64, G71-00, G78-31, G78-34, R78-31, R78-34
787 Fault Isolation Manual	27-10

Damage Tolerance Based Structural Inspections:

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.

Alert Service Bulletin B787-81205-SB270026-00

MATERIAL INFORMATION

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 10.	References

Description

Group 1-2:

1. Material - Price and Availability

The operator can supply the parts and materials shown in Paragraph 3., Parts Necessary for Each Airplane. As an alternative, operators can purchase the parts from Boeing Spares. This service bulletin does not show the Boeing price and supply data.

2. Industry Support Information

Boeing Industry Support information is provided in Program Letter BPL 6-1151-787-PGM-206, dated August 15, 2014. Additional copies of program letters are available from Boeing Fleet Support Contracts - Warranty.

3. Parts Necessary for Each Airplane

A. Kits/Parts:

None.

B. Parts and Materials Supplied by the Operator:

Table 1

Part Number / Specification	QTY	Name	Notes
HyJet V	350 gal-lons	Hydraulic Fluid	Group 1, Configuration 2 and Group 2 only. *[1]

Table 1

Part Number / Specification	QTY	Name	Notes

*[1] ExxonMobil Oil Corporation.
Address:
Anderol Specialty Lubricants, a Division of Chemtura
215 Merry Lane
East Hanover, NJ 07936
For procurement, contact ExxonMobil Oil Corporation.

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

Boeing can supply the tool(s) shown in Paragraph 6., Special Tooling Necessary to do this Service Bulletin. Operators are encouraged to share schedule requirements with Boeing for incorporation of the service bulletin by e-mail to ServiceBulletinRentalLoanTools@boeing.com. The tool(s) are subject to the terms and conditions of the Boeing standard purchase order acknowledgement. Prices are in United States Dollars. Terms: Net 30 days.

Reference this service bulletin number and submit purchase order by one of the methods:

1. Order on-line via ATA Spec 2000 or Boeing Part Page
2. Fax to (206) 662-8237

Table 2 Rental Data:

Tool Kit Number	Name	Daily Price as of the Issue 001 date of this Service Bulletin (US Dollars)
TSF036Z0229 *[1]	HYDRAULIC FLUID CHECK TOOL	$340.00

*[1] Group 1, Configuration 2 and Group 2 only.

6. Special Tooling Necessary to do this Service Bulletin

To get the tools shown below, refer to Paragraph 5., Special Tooling - Price and Availability. Maintenance and overhaul tools in the manuals given in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 10., References, can also be necessary. Examine operator tool supply to make sure all necessary tools are available.

Table 3

Tool Kit Number	Name
TSF036Z0229 *[1]	HYDRAULIC FLUID CHECK TOOL

*[1] Group 1, Configuration 2 and Group 2 only.

Alert Service Bulletin B787-81205-SB270026-00

ACCOMPLISHMENT INSTRUCTIONS

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 10.	References
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 7.	Manpower
SB B787-A-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-0GA-931D-D Issue 001	Alert Service Bulletin B787-81205-SB270026-00 – Appendix G – TEST SCREENS [Group 1, Configuration 2; Group 2:]
SB B787-81205-SB290022-00 Issue 001	HYDRAULIC POWER - Hydraulic System - HyJet V Marker Installation
787 AMM 29-11-00	HYDRAULIC SYSTEM
787 AMM 07-11-01	JACKING
787 AMM 29-21-00	RAM AIR TURBINE SYSTEM
787 AMM 32-00-30	LANDING GEAR DOWNLOCK PINS
787 AMM 32-00-15	LANDING GEAR DOOR SAFETY
787 AMM 12-12-01	HYDRAULIC SYSTEMS
787 AMM 27-02-00	PRIMARY FLIGHT CONTROL FUNCTION
787 AMM 55-16-01	HORIZONTAL STABILIZER TRAILING EDGE SKIN PANELS
787 AMM 20-10-09	TUBE
787 AMM 45-11-00	CENTRAL MAINTENANCE COMPUTING FUNCTION

Reference	Title
787 AMM 57-51-10	FIXED TRAILING EDGE PANELS
787 AMM 27-11-19	AILERON POWER CONTROL UNIT
787 AMM 27-31-09	ELEVATOR POWER CONTROL UNIT

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-27-00-0026-00A-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. The work instructions are divided into work packages. Task Hours and Elapsed Hours for each package are given in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 7., Manpower. You can do each work package independently. WORK PACKAGE 1 must be done first or at the same time as WORK PACKAGE 2, WORK PACKAGE 3 or WORK PACKAGE 4.
4. 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.
5. Use the approved fastener, process and material substitutions in accordance with SRM Chapter 51.

6. A Detailed Inspection is defined as: An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate procedures may be required.

7. 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.

8. 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.

9. 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.

10. Where the work instructions include installation of a kept part, a new or serviceable part with the same part number can be installed as an alternative to the kept part.

11. This service bulletin includes functional test procedures for the systems changed by this service bulletin. More functional tests can possibly be necessary in accordance with standard maintenance practices because of interruption to other airplane systems.

12. Refer to Appendix A , Appendix B, Appendix C, Appendix D, Appendix E and Appendix F for logic diagrams(s). Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Step 2., Work Instructions, is the primary source for tasks required for compliance.

13. Use of colors in Tasks is based on guidance from the S1000D International specification for technical publications.

14. When more than one OPTION is given for a CONDITION, do only one of the OPTION numbers. When more than one ACTION is given for a CONDITION number or an OPTION number, do all of the ACTION numbers for that CONDITION number or OPTION number.

15. The compliance times for the actions in Step 2., Work Instructions are in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance.

16. The CONDITIONS, ACTIONS and OPTIONS shown apply to each WORK PACKAGE, 5 and 6, independently.

17. The CONDITIONS, ACTIONS and OPTIONS shown apply to each WORK PACKAGE, 7 and 8, independently.

18. Some steps in the Work Instructions are identified as Required for Compliance (RC). If this service bulletin is mandated by an Airworthiness Directive (AD), then the steps identified as RC must be done to comply with the AD. Alternative procedures for steps not identified with RC can

be used if the RC steps can still be done as specified, and the airplane can be put back in a serviceable condition. An Alternative Method of Compliance (AMOC) is not necessary for deviations to steps that are not identified as RC.

2. WORK INSTRUCTIONS

A. WORK PACKAGE 1: MARKER INSTALLATION

(1) RC - Install markers in accordance with SB B787-81205-SB290022-00 Issue 001 or later approved issue.

(2) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

B. WORK PACKAGE 2: LEFT HYDRAULIC SYSTEM FLUID TEST

Group 2, Configuration 2:

(1) Do PART 1: INITIAL HYDRAULIC FLUID REPLACEMENT and do PART 2: CYCLE HYDRAULIC FLUID.

Group 1, Configuration 2; Group 2:

(2) Do PART 3: HYDRAULIC FLUID TEST. Boeing will provide the test results to the operator through the Boeing Communication System. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

(a) CONDITION 1: PASSES THE HYDRAULIC FLUID TEST

1) No further action required for WORK PACKAGE 2.

(b) CONDITION 2: DOES NOT PASS THE HYDRAULIC FLUID TEST

1) CONDITION 2 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.

2) CONDITION 2 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 1 is met.

(3) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

C. WORK PACKAGE 3: RIGHT HYDRAULIC SYSTEM FLUID TEST

Group 2, Configuration 2:

(1) Do PART 1: INITIAL HYDRAULIC FLUID REPLACEMENT and do PART 2: CYCLE HYDRAULIC FLUID.

Group 1, Configuration 2; Group 2:

(2) Do PART 3: HYDRAULIC FLUID TEST. Boeing will provide the test results to the operator through the Boeing Communication System. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

(a) CONDITION 3: PASSES THE HYDRAULIC FLUID TEST

1) No further action required for WORK PACKAGE 3.

(b) CONDITION 4: DOES NOT PASS THE HYDRAULIC FLUID TEST

1) CONDITION 4 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.

2) CONDITION 4 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 3 is met.

(3) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

D. WORK PACKAGE 4: CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST

Group 2, Configuration 2:

(1) Do PART 1: INITIAL HYDRAULIC FLUID REPLACEMENT and do PART 2: CYCLE HYDRAULIC FLUID.

Group 1, Configuration 2; Group 2:

(2) Do PART 3: HYDRAULIC FLUID TEST. Boeing will provide the test results to the operator through the Boeing Communication System. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.

(a) CONDITION 5: PASSES THE HYDRAULIC FLUID TEST

CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) can be done in any sequence. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service after each action independently.

1) CONDITION 5 (ACTION 1): Do WORK PACKAGE 5: LEFT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

2) CONDITION 5 (ACTION 2): Do WORK PACKAGE 6: RIGHT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

3) CONDITION 5 (ACTION 3): Do WORK PACKAGE 7: LEFT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

4) CONDITION 5 (ACTION 4): Do WORK PACKAGE 8: RIGHT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

5) No further action required for WORK PACKAGE 4 after CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) are done.

(b) CONDITION 6: DOES NOT PASS THE HYDRAULIC FLUID TEST

1) CONDITION 6 (ACTION 1): Do PART 4: REPLACE HYDRAULIC FLUID and do PART 2: CYCLE HYDRAULIC FLUID.

2) CONDITION 6 (ACTION 2): Do PART 3: HYDRAULIC FLUID TEST until CONDITION 5 is met.

(3) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

E. WORK PACKAGE 5: LEFT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Check maintenance records to find the left elevator inboard power control unit time in service.

(a) CONDITION 5.1: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE

1) No further action required for WORK PACKAGE 5.

(b) CONDITION 5.2: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

1) Do one of these options:

a) OPTION 1:

Do PART 5: ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

<1> CONDITION 5.2.1: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.560 GALLONS PER MINUTE

<a> No further action required for WORK PACKAGE 5.

<2> CONDITION 5.2.2: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.560 GALLONS PER MINUTE

<a> Do PART 7: REPLACE THE POWER CONTROL UNIT.

<b> No further action required for WORK PACKAGE 5.

b) OPTION 2:

Do PART 7: REPLACE THE POWER CONTROL UNIT.

<1> No further action required for WORK PACKAGE 5.

(2) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

F. WORK PACKAGE 6: RIGHT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Check maintenance records to find the right elevator inboard power control unit time in service.

(a) CONDITION 5.1: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE

1) No further action required for WORK PACKAGE 6.

(b) CONDITION 5.2: THE ELEVATOR INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

1) Do one of these options:

a) OPTION 1:

Do PART 5: ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

<1> CONDITION 5.2.1: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.560 GALLONS PER MINUTE

<a> No further action required for WORK PACKAGE 6.

<2> CONDITION 5.2.2: THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.560 GALLONS PER MINUTE

<a> Do PART 7: REPLACE THE POWER CONTROL UNIT.

<b> No further action required for WORK PACKAGE 6.

b) OPTION 2:
Do PART 7: REPLACE THE POWER CONTROL UNIT.

<1> No further action required for WORK PACKAGE 6.

(2) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

G. WORK PACKAGE 7: LEFT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Check maintenance records to find the left aileron inboard power control unit time in service.

(a) CONDITION 5.3: THE AILERON INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE

1) No further action required for WORK PACKAGE 7.

(b) CONDITION 5.4: THE AILERON INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

1) Do one of these options:

a) OPTION 3:
Do PART 6: AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

<1> CONDITION 5.4.1: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.297 GALLONS PER MINUTE

<a> No further action required for WORK PACKAGE 7.

<2> CONDITION 5.4.2: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.297 GALLONS PER MINUTE

<a> Do PART 7: REPLACE THE POWER CONTROL UNIT.

<b> No further action required for WORK PACKAGE 7.

b) OPTION 4:
Do PART 7: REPLACE THE POWER CONTROL UNIT.

<1> No further action required for WORK PACKAGE 7.

(2) Put the airplane back to a serviceable condition.

Group 1, Configuration 2; Group 2:

H. WORK PACKAGE 8: RIGHT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Check maintenance records to find the right aileron inboard power control unit time in service.

(a) CONDITION 5.3: THE AILERON INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE

1) No further action required for WORK PACKAGE 8.

(b) CONDITION 5.4: THE AILERON INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

1) Do one of these options:

a) OPTION 3:
Do PART 6: AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST.

<1> CONDITION 5.4.1: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.297 GALLONS PER MINUTE

<a> No further action required for WORK PACKAGE 8.

<2> CONDITION 5.4.2: THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.297 GALLONS PER MINUTE

<a> Do PART 7: REPLACE THE POWER CONTROL UNIT.

<b> No further action required for WORK PACKAGE 8.

b) OPTION 4:

Do PART 7: REPLACE THE POWER CONTROL UNIT.

<1> No further action required for WORK PACKAGE 8.

(2) Put the airplane back to a serviceable condition.

Group 2, Configuration 2:

I. PART 1: INITIAL HYDRAULIC FLUID REPLACEMENT

(1) RC - Replace the hydraulic fluid with HyJet V. Refer to 787 AMM 29-11-00 Hydraulic System Fluid - Replacement as an accepted procedure.

(a) For WORK PACKAGE 2: Do the left hydraulic system.

(b) For WORK PACKAGE 3: Do the right hydraulic system.

(c) For WORK PACKAGE 4: Do the center hydraulic system. Leave the airplane on jacks after replacing the hydraulic fluid.

Group 2, Configuration 2:

J. PART 2: CYCLE HYDRAULIC FLUID

(1) Do these steps to cycle the hydraulic fluid :

(a) For WORK PACKAGE 2 and WORK PACKAGE 3: Do one of these options:

1) OPTION 5: Put the airplane back to a serviceable condition and fly 1 or more flight cycles.

2) OPTION 6: Do these steps to operate the flight surfaces and thrust reversers:

a) Make sure all hydraulic carts are disconnected.

b) Make sure that these circuit breakers are closed on the circuit breaker indication and control (CBIC) panel:

Table 1 WORK PACKAGE 2:

Designation	CB
AIL REU LOB PWR	CE2711305
AUTO SPDBRK ACT CTRLR PWR	CE2761413
ELEV REU LOB PWR	CE2731307
FLAPERON REU LIB PWR	CE2711206
FLAPERON REU ROB PWR	CE2711306

Table 1 WORK PACKAGE 2:

Designation	CB
RUD REU MID PWR	CE2721308
T/R DIRECTIONAL CTRL VLV-L ENGINE	CE7834811
T/R LEVEL INTLK-L ENGINE	CE7834813
T/R TRK LOCK VLV-L ENGINE	CE7834814

Table 2 WORK PACKAGE 3:

Designation	CB
AIL REU ROB PWR	CE2711405
AUTO SPDBRK ACT CTRLR PWR	CE2761413
ELEV REU ROB PWR	CE2731407
FLAPERON REU LOB PWR	CE2711406
RUD REU LWR PWR	CE2721408
T/R DIRECTIONAL CTRL VLV-R ENGINE	CE7834821
T/R LEVEL INTLK-R ENGINE	CE7834823
T/R TRK LOCK VLV-R ENGINE	CE7834824

c) Pressurize the hydraulic system with the engine-driven pump (EDP). For WORK PACKAGE 2, do the left EDP. For WORK PACKAGE 3, do the right EDP. Refer to 787 AMM 29-11-00 Hydraulic System (with an Engine-Driven Pump) - Pressurization as an accepted procedure.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

d) RC - Operate the elevator with the EDP. Do these steps 3 times:

<1> Use the flight controls synoptic page to make sure that the elevator moves fully.

<2> Push the control column fully forward.

<3> Push the control column fully aft.

<4> Push the control column to the neutral position.

e) Pressurize the hydraulic system with an electric motor pump (EMP). For WORK PACKAGE 2, do the left EMP. For WORK PACKAGE 3, do the right EMP. Refer to 787 AMM 29-11-00 Hydraulic System (with an Electric Motor Pump) - Pressurization as an accepted procedure.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

f) RC - Operate the elevator with the EMP. Do these steps 9 times:

<1> Use the flight controls synoptic page to make sure that the elevator moves fully.

<2> Push the control column fully forward.

<3> Push the control column fully aft.

<4> Push the control column to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

g) RC - Operate the rudder with the EMP. Do these steps 15 times:

<1> Use the flight controls synoptic page to make sure that the rudder moves fully.

<2> Push the right rudder pedal fully forward.

<3> Push the left rudder pedal fully forward.

<4> Let the rudder pedals move to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

h) RC - Operate the flaperons with the EMP. Do these steps 5 times:

<1> Use the flight controls synoptic page to make sure that the flaperons moves fully.

<2> Turn the control wheel from the neutral position to fully right.

<3> Turn the control wheel from fully right to fully left.

<4> Turn the control wheel from fully left to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

i) RC - Operate the spoilers with the EMP. Do these steps 11 times:

<1> Use the flight controls synoptic page to make sure that the spoilers moves fully.

<2> Move the speedbrake lever from the DOWN position to the UP position.

<3> Move the speedbrake lever from the UP position to the DOWN position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

j) RC - Operate the ailerons with the EMP. Do these steps 15 times:

<1> Use the flight controls synoptic page to make sure that the ailerons moves fully.

<2> Turn the control wheel from the neutral position to fully right.

<3> Turn the control wheel from fully right to fully left.

<4> Turn the control wheel from fully left to the neutral position.

k) To operate the thrust reverser, have one person push and hold the TEST ENABLE switch in the TEST position.

NOTE: The TEST ENABLE switch is at the 7 o'clock position on the aft bulkhead of the inlet cowl.

NOTE: If your release the test enable switch, it will cause the EEC to immediately close the isolation valve and stop the movement of the translating sleeves. No movement of the translating sleeves can occur unless you push and hold the test enable switch.

WARNING: KEEP ALL PERSONNEL AND EQUIPMENT AWAY FROM THE AREA THAT IS AFT OF THE APPLICABLE THRUST REVERSER. IF YOU IGNORE THIS INSTRUCTION, INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE THRUST REVERSER EXTENDS.

WARNING: MAKE SURE THAT THE AREA AROUND THE SPOILERS IS CLEAR OF PERSONS AND EQUIPMENT. THE SPOILERS CAN MOVE QUICKLY. THIS CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

CAUTION: DO NOT OPEN THE THRUST REVERSER IF THE TRANSLATING SLEEVES ARE EXTENDED. THE EXTENDED SLEEVES CAN HIT THE STRUT PANELS. DAMAGE TO EQUIPMENT CAN OCCUR.

CAUTION: DO NOT EXTEND THE THRUST REVERSER SLEEVE IF THE THRUST REVERSER IS OPEN. DAMAGE TO THE THRUST REVERSER AND ADJACENT STRUCTURES CAN OCCUR.

l) RC - Operate the thrust reverser with the EMP. Do these steps 4 times:

<1> Make sure that the thrust reversers deploy and stow fully.

<2> While one person holds the TEST ENABLE switch, move the left reverse thrust lever up and aft until it engages the interlock stop.

NOTE: The extend time of the translating sleeves is 3 seconds.

<3> While one person holds the TEST ENABLE switch, move the left reverse thrust lever forward and down to the retract position.

NOTE: The retract time of the translating sleeves is less than 8 seconds.

<a> Hold the TEST ENABLE switch until 12 to 15 seconds after the translating sleeves retract fully

(b) For WORK PACKAGE 4: Do one of these options:

1) OPTION 7: Do these steps to fly 1 or more flight cycles:

a) Lower the airplane from jacks. Refer to 787 AMM 07-11-01 Lift the Airplane on Jacks - Handling as an accepted procedure

b) Put the airplane back to a serviceable condition and fly 1 or more flight cycles.

2) OPTION 8: Do these steps to operate the flight surfaces, ram air turbine (RAT) and landing gear:

a) Make sure all hydraulic carts are disconnected.

b) Make sure that these circuit breakers are closed on the circuit breaker indication and control (CBIC) panel:

Table 3 WORK PACKAGE 4:

Designation	CB
MLG BYPASS VLV-ENABLE 1	CE3231801
MLG BYPASS VLV-ENABLE 2	CE3231802
NLG BYPASS VLV-ENABLE 1	CE3231803
NLG BYPASS VLV-ENABLE 2	CE3231804
AIL REU LIB PWR	CE2711106
AIL REU RIB PWR	CE2711205
AUTO SPDBRK ACT CTRLR PWR	CE2761413
ELEV REU LIB PWR	CE2731108
ELEV REU RIB PWR	CE2731207
FLAPERON REU RIB PWR	CE2711107
RUD REU UPR PWR	CE2721109
ELECT ACTR-SPLR 10	CK2761501
ELECT ACTR-SPLR 11	CK2761503
ELECT ACTR-SPLR 4	CK2761504
ELECT ACTR-SPLR 5	CK2761502
ALTN EXTEND ISLN VLV CLOSE-1	CE2911831
ALTN EXTEND ISLN VLV CLOSE-2	CE2911832
HYD ISLN VLV-NLG OPEN 1	CE2911819
HYD ISLN VLV-NLG OPEN 2	CE2911820

c) Pressurize the hydraulic system with the C2 electric motor pump (EMP). Refer to 787 AMM 29-11-00 Hydraulic System (with an Electric Motor Pump) - Pressurization as an accepted procedure.

d) RC - Do these steps to operate the elevator with the C2 EMP:

<1> Use the flight controls synoptic page to make sure that the elevator moves fully.

<2> Push the control column fully forward.

<3> Push the control column fully aft.

<4> Push the control column to the neutral position.

e) Pressurize the hydraulic system with the C1 EMP. Refer to 787 AMM 29-11-00 Hydraulic System (with an Electric Motor Pump) - Pressurization as an accepted procedure.

f) RC - Operate the Ram Air Turbine (RAT) with the C1 EMP. Do these steps 4 times:

<1> Extend the RAT. Do not install the RAT protective cover or the RAT blade protective cover. Refer to 787 AMM 29-21-00 Ram Air Turbine Extension - Operation as an accepted procedure.

<2> Retract the RAT. Refer to 787 AMM 29-21-00 Ram Air Turbine Retraction - Operation as an accepted procedure.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

g) RC - Operate the elevators with the C1 EMP. Do these steps 6 times:

<1> Use the flight controls synoptic page to make sure that the elevators moves fully.

<2> Push the control column fully forward.

<3> Push the control column fully aft.

<4> Push the control column to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

h) RC - Operate the rudder with the C1 EMP. Do these steps 15 times:

<1> Use the flight controls synoptic page to make sure that the rudder moves fully.

<2> Push the right rudder pedal fully forward.

<3> Push the left rudder pedal fully forward.

<4> Let the rudder pedals move to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

i) RC - Operate the flaperons with the C1 EMP. Do these steps 6 times:

<1> Use the flight controls synoptic page to make sure that the flaperons moves fully.

<2> Turn the control wheel from the neutral position to fully right.

<3> Turn the control wheel from fully right to fully left.

<4> Turn the control wheel from fully left to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

j) RC - Operate the spoilers with the C1 EMP. Do these steps 12 times:

<1> Use the flight controls synoptic page to make sure that the spoilers moves fully.

<2> Move the speedbrake lever from the DOWN position to the UP position.

<3> Move the speedbrake lever from the UP position to the DOWN position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

k) RC - Operate the ailerons with the C1 EMP. Do these steps 15 times:

<1> Use the flight controls synoptic page to make sure that the ailerons moves fully.

<2> Turn the control wheel from the neutral position to fully right.

<3> Turn the control wheel from fully right to fully left.

<4> Turn the control wheel from fully left to the neutral position.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

l) RC - Do these steps to operate the flaps with the C1 EMP.

<1> Move the flap lever from the UP detent to the 5 detent.

<2> Move the flap lever from the 5 detent to the UP detent.

m) With landing gear pins removed and door safety valves in the STOW position, retract the landing gear.

n) Extend the landing gear using the alternate extend system.

o) RC - Retract and extend the landing gear 2 times using the landing gear lever.

p) Do these steps to operate the landing gear with the C1 EMP:

<1> If the downlock pins are installed in the nose or main landing gear, remove them. Refer to 787 AMM 32-00-30 Landing Gear Downlock Pins - Removal as an accepted procedure.

WARNING: MAKE SURE THE AREA AROUND THE LANDING GEAR AND ITS DOORS ARE CLEAR OF PERSONS AND EQUIPMENT DURING A LANDING GEAR RETRACTION AND EXTENSION TEST. THIS WILL HELP PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

<2> Activate the landing gear doors. Refer to 787 AMM 32-00-15 Landing Gear Door - Activation as an accepted procedure.

WARNING: MAKE SURE THE AREA AROUND THE LANDING GEAR AND ITS DOORS ARE CLEAR OF PERSONS AND EQUIPMENT DURING A LANDING GEAR RETRACTION AND EXTENSION TEST. THIS WILL HELP PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

<3> Move the control lever for the landing gear to the UP position.

WARNING: MAKE SURE THE AREA AROUND THE LANDING GEAR AND ITS DOORS ARE CLEAR OF PERSONS AND EQUIPMENT DURING A LANDING GEAR RETRACTION AND EXTENSION TEST. THIS WILL HELP PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

<4> Do these steps to extend the landing gear:

<a> Push and hold the ALTN GEAR switch on the P2 panel to DOWN to extend the landing gear.

<b> Move the control lever for the landing gear to the DOWN position.

WARNING: MAKE SURE THE AREA AROUND THE LANDING GEAR AND ITS DOORS ARE CLEAR OF PERSONS AND EQUIPMENT DURING A LANDING GEAR RETRACTION AND EXTENSION TEST. THIS WILL HELP PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

<5> RC - Operate the landing gear. Do these steps 2 times:

<a> Move the control lever for the landing gear to the UP position.

<b> Move the control lever for the landing gear to the DOWN position.

WARNING: MAKE SURE THE AREA AROUND THE LANDING GEAR AND ITS DOORS ARE CLEAR OF PERSONS AND EQUIPMENT DURING A LANDING GEAR RETRACTION AND EXTENSION TEST. THIS WILL HELP PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

<6> Move the control lever for the landing gear to the UP position.

q) 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

r) Install the downlock pins in the nose and main landing gear. Refer to 787 AMM 32-00-30 Landing Gear Downlock Pins - Installation as an accepted procedure

s) Lower the airplane from jacks. Refer to 787 AMM 07-11-01 Lift the Airplane on Jacks - Handling as an accepted procedure.

Group 1, Configuration 2; Group 2:

K. PART 3: HYDRAULIC FLUID TEST

(1) RC - Take a 16 ounce or more sample of the hydraulic fluid. It is acceptable to take two 8 ounce bottle samples from the same hydraulic system. Refer to 787 AMM 29-11-00, Hydraulic Fluid Sampling - Inspection, as an accepted procedure.

(2) Label each sample with the following information:

(a) airplane

(b) flight cycles

(c) flight hours

(d) hydraulic system sampled (left, right or center)

(3) Ship the hydraulic fluid sample to the following address:

The Boeing Company

2-10 Bldg, Door S25 Seattle Receive

7701 14th Avenue South

Seattle, WA 98108-4002 USA

Route To: Will Call

Attention: Steve Millett (Composition Testing)

NOTE: Multiple hydraulic fluid samples can be shipped in the same shipping container as long as the bottles are properly labeled and contained to prevent cross contamination.

(4) Send a message to Boeing through the Boeing Communication System with the following information:

(a) MODEL: 787-8

(b) ATA: 2700-00

(c) SUBJECT: 787 Hydraulic Fluid Test

(d) Shipping information including airway bill number and courier company

(e) Airplane, flight cycles, flight hours and system of fluid arriving in shipment.

Group 1, Configuration 2; Group 2:

L. PART 4: REPLACE HYDRAULIC FLUID

(1) RC - Do one of these options:

(a) OPTION 9: Replace the hydraulic fluid with HyJet V. Refer to 787 AMM 29-11-00 Hydraulic System Fluid - Replacement as an accepted procedure.

1) For WORK PACKAGE 2: Do the left hydraulic system.

2) For WORK PACKAGE 3: Do the right hydraulic system.

3) For WORK PACKAGE 4: Do the center hydraulic system. Leave the airplane on jacks after replacing the hydraulic fluid.

(b) OPTION 10: Drain and fill the hydraulic system reservoir. Refer to 787 AMM 12-12-01 Hydraulic Reservoir - Drain Liquid and 787 AMM 12-12-01 Hydraulic Reservoir (Task Selection) - Servicing as accepted procedures.

1) For WORK PACKAGE 2: Do the left hydraulic system.

2) For WORK PACKAGE 3: Do the right hydraulic system.

3) For WORK PACKAGE 4: Do the center hydraulic system.

Group 1, Configuration 2; Group 2:

M. PART 5: ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Do these steps for the elevator inboard power control unit (PCU) internal flow test. For WORK PACKAGE 5, do the left elevator. For WORK PACKAGE 6, do the right elevator. The elevator inboard PCU internal flow test can be done for WORK PACKAGE 5 and WORK PACKAGE 6 at the same time.

(2) Prepare for the test and install tool TSF036Z0229:

(a) Use the pitch trim switches on the captain's or first officer's control wheel to move the stabilizer to the 4 unit position.

(b) On the control stand, put the L2 and R2 STAB CUTOUT switches to the CUTOUT position.

1) Attach a DO NOT OPERATE tag on the L2 and R2 STAB CUTOUT switches.

(c) Depressurize the center hydraulic system and reservoir. Refer to 787 AMM 29-11-00 as an accepted procedure.

(d) Put the FLIGHT CONTROL SURFACE switch for the TAIL in the LOCK position and install a DO NOT OPERATE tag on the switch. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(e) Remove Flight Control Electronic (FCE) cabinet power.

1) Open these circuit breakers and lock with DO NOT CLOSE tags on the circuit breaker indication and control (CBIC) panel:

Table 4

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(f) Gain access to the elevator PCUs:

1) For WORK PACKAGE 5, open panel 335CB - Horizontal Stabilizer TE Panel and 335FBX - Horizontal Stabilizer TE Seal - Mid. Refer to 787 AMM 55-16-01 Horizontal Stabilizer Trailing Edge Skin Panel - Removal as an accepted procedure.

2) For WORK PACKAGE 6, open panel 345CB - Horizontal Stabilizer TE Panel and 345FBX - Horizontal Stabilizer TE Seal - Mid. Refer to 787 AMM 55-16-01 Horizontal Stabilizer Trailing Edge Skin Panel - Removal as an accepted procedure.

(g) RC - Remove and keep the hydraulic return line between the elevator inboard PCU and the rib hinge. Refer to 787 AMM 20-10-09 Tube Assembly - Flareless - Removal as an accepted procedure.

(h) RC - Install tool TSF036Z0229 between the elevator inboard PCU and rib hinge.

(i) Make sure the hose between the tool TSF036Z0229 and the PCU is connected to the tee fitting on the tool furthest away from the ball valve.

CAUTION: IF THE BALL VALVE OF TOOL TSF036Z0229 IS NOT OPEN WHEN THE HYDRAULIC SYSTEM IS PRESSURIZED, THE HIGH FLOW RATES CAN DAMAGE THE TOOL.

(j) Make sure the ball valve on the tool is in the open position.

(k) Supply FCE cabinet power.

1) Unlock these DO NOT CLOSE tags and close these circuit breakers on the CBIC panel:

Table 5

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(l) Put the FLIGHT CONTROL SURFACE switch for the TAIL in the NORM position and remove the DO NOT OPERATE tag. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(m) On the control stand, put the L2 and R2 STAB CUTOUT switches to the NORM position and remove the DO NOT OPERATE tags.

(n) Do these steps to pressurize the center hydraulic system and inspect the tool TSF036Z0229 connections for leaks:

1) Pressurize the center hydraulic system. Refer to 787 AMM 29-11-00 as an accepted procedure.

2) Operate the elevators. Do these steps 7 times:

a) Use the flight controls synoptic page to make sure that the elevators moves fully.

b) Push the control column fully forward.

c) Push the control column fully aft.

d) Push the control column to the neutral position.

3) Do a detailed visual inspection for hydraulic fluid leaks at the tool TSF036Z0229 connections. If leaks are found, fix them.

(o) For the center hydraulic system, turn the applicable switch on the hydraulic system control panel (P5) to the OFF position:

1) HYDRAULIC PRIMARY C1 ELEC

2) HYDRAULIC PRIMARY C2 ELEC

(3) Test Procedure:

(a) Make sure page 2 of the Flight Controls Maintenance Pages is showing. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 1 for illustration of this screen.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(b) Start the applicable Central Maintenance Computing Function (CMCF) ground test: 27 Primary Flight Control System, LRU Replacement, Left or Right Elevator Major Rig. Refer to 787 AMM 45-11-00 Start a Ground Test - Software Operation as an accepted procedure.

(c) After the test starts, continue through the test procedure until the GROUND TESTS screen shows the following. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 2 for illustration of this screen.

"The surface may now be ramped through 20 warm up/bleed cycles."

(d) Prepare to monitor the DELTA PRESS readout for the elevator inboard PCU on Page 2 of the Flight Controls Maintenance Pages. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 1 for illustration of this screen.

(e) On the GROUND TESTS screen, select the SKIP WARMUP AND BLEED and then click the CONTINUE buttons. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 2 for illustration of this screen.

(f) When the DELTA PRESS for the elevator inboard PCU is between -4400 psi and -5500 psi on Page 2 of the Flight Controls Maintenance Pages, push the STOP TEST button on the GROUND TESTS screen.

NOTE: A warning screen will show, do not push any additional buttons at this time.

(g) Make sure the DELTA PRESS readout for the elevator inboard PCU on Page 2 of the Flight Controls Maintenance Pages remains between -4400 psi and -5500 psi.

CAUTION: IF YOU DO NOT OBEY THIS STEP CORRECTLY, YOU WILL HAVE TO RE-RIG THE SURFACE.

1) If the GROUND TESTS screen shows "Select position adjustments below until the elevator being rigged is at the external alignment feature", the STOP TEST button was not pushed in time. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 3 for illustration of this screen. Push the STOP TEST button and start the Test Procedure again. Do not push CONTINUE on this GROUND TESTS screen. If you push CONTINUE, you will need to re-rig the surface.

2) If the DELTA PRESS is not between -4400 psi and -5500 psi, Push the STOP TEST button on the GROUND TESTS screen and start the Test Procedure again.

(h) RC - Close the ball valve on tool TSF036Z0229.

(i) RC- Read and record the flow through the indicator of tool TSF036Z0229 ten or more minutes after the ball valve is closed.

(j) Open the ball valve on tool TSF036Z0229.

(k) Push the STOP TEST button on the GROUND TESTS warning screen.

(4) Remove the tool:

(a) On the control stand, put the L2 and R2 STAB CUTOUT switches to the CUTOUT position.

1) Attach a DO NOT OPERATE tag on the L2 and R2 STAB CUTOUT switches.

(b) Depressurize the center hydraulic system and reservoir. Refer to 787 AMM 29-11-00 as an accepted procedure.

(c) Put the FLIGHT CONTROL SURFACE switch for the TAIL in the LOCK position and install a DO NOT OPERATE tag on the switch. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(d) Remove FCE cabinet power.

1) Open these circuit breakers and lock with DO NOT CLOSE tags on the CBIC panel:

Table 6

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(e) RC - Disconnect and remove tool TSF036Z0229 between the elevator inboard PCU and the rib hinge.

(f) RC - Install the kept hydraulic return line between the elevator inboard PCU and rib hinge. Refer to 787 AMM 20-10-09 Tube Assembly - Flareless - Installation as an accepted procedure.

(g) Supply FCE cabinet power.

1) Unlock these DO NOT CLOSE tags and close these circuit breakers on the CBIC panel:

Table 7

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(h) Put the FLIGHT CONTROL SURFACE switch for the TAIL in the NORM position and remove the DO NOT OPERATE tag. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(i) On the control stand, put the L2 and R2 STAB CUTOUT switches to the NORM position and remove the DO NOT OPERATE tag.

(j) Do these steps to pressurize the hydraulic system and inspect the hydraulic return line to elevator inboard PCU connection for leaks where the tool was installed:

1) Pressurize the center hydraulic system. Refer to 787 AMM 29-11-00 as an accepted procedure.

2) Operate the elevators. Do these steps 7 times:

a) Use the flight controls synoptic page to make sure that the elevators moves fully.

b) Push the control column fully forward.

c) Push the control column fully aft.

d) Push the control column to the neutral position.

3) Do a detailed visual inspection for hydraulic fluid leaks at the elevator inboard PCU hydraulic return line connections. If leaks are found, fix them.

(k) Close access to the elevator PCUs:

1) For WORK PACKAGE 5, close panel 335CB - Horizontal Stabilizer TE Panel and 335FBX - Horizontal Stabilizer TE Seal - Mid. Refer to 787 AMM 55-16-01 Horizontal Stabilizer Trailing Edge Skin Panel - Installation as an accepted procedure.

2) For WORK PACKAGE 6, close panel 345CB - Horizontal Stabilizer TE Panel and 345FBX - Horizontal Stabilizer TE Seal - Mid. Refer to 787 AMM 55-16-01 Horizontal Stabilizer Trailing Edge Skin Panel - Installation as an accepted procedure.

Group 1, Configuration 2; Group 2:

N. PART 6: AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

(1) Do these steps for the aileron inboard power control unit (PCU) internal flow test. For WORK PACKAGE 7, do the left aileron. For WORK PACKAGE 8, do the right aileron. The aileron inboard PCU internal flow test can be done at the same time for WORK PACKAGE 7 and WORK PACKAGE 8.

(2) Prepare for the test and install tool TSF036Z0229:

(a) Depressurize the center hydraulic system and reservoir. Refer to 787 AMM 29-11-00 as an accepted procedure.

(b) Put the FLIGHT CONTROL SURFACE switch for the WINGS in the LOCK position and install a DO NOT OPERATE tag. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(c) Remove Flight Control Electronic (FCE) cabinet power.

1) Open these circuit breakers and lock with DO NOT CLOSE tags on the circuit breaker indication and control (CBIC) panel:

Table 8

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(d) Gain access to the aileron PCUs:

1) For WORK PACKAGE 7, open panel 561YB and 561ZB - Wing Lower Fixed Trailing Edge Panel. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

2) For WORK PACKAGE 8, open panel 661YB and 661ZB - Wing Lower Fixed Trailing Edge Panel. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Removal as an accepted procedure.

(e) RC - Remove and keep the hydraulic return line between the aileron inboard PCU and the rear spar. Refer to 787 AMM 20-10-09 Tube Assembly - Flareless - Removal as an accepted procedure.

(f) RC - Install tool TSF036Z0229 between the aileron inboard PCU and the rear spar.

(g) Make sure the hose between the tool TSF036Z0229 and the PCU is connected to the tee fitting on the tool furthest away from the ball valve.

CAUTION: IF THE BALL VALVE OF TOOL TSF036Z0229 IS NOT OPEN WHEN THE HYDRAULIC SYSTEM IS PRESSURIZED, THE HIGH FLOW RATES CAN DAMAGE THE TOOL.

(h) Make sure the ball valve on the tool is in the open position.

(i) Supply FCE cabinet power.

1) Unlock these DO NOT CLOSE tags and close these circuit breakers on the CBIC panel:

Table 9

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(j) Put the FLIGHT CONTROL SURFACE switch for the WINGS in the NORM position and remove the DO NOT OPERATE tag. Refer to 787 AMM 27-02-00 Flight Control Surface Lock Switches - Operation as an accepted procedure.

(k) Do these steps to pressurize the center hydraulic system and inspect the tool TSF036Z0229 connections for leaks:

1) Pressurize the center hydraulic system. Refer to 787 AMM 29-11-00 as an accepted procedure.

2) Operate the ailerons. Do these steps 7 times:

a) Use the flight controls synoptic page to make sure that the ailerons moves fully.

b) Turn the control wheel from the neutral position to fully right.

c) Turn the control wheel from fully right to fully left.

d) Turn the control wheel from fully left to the neutral position.

3) Do a detailed visual inspection for hydraulic fluid leaks at the tool TSF036Z0229 connections. If leaks are found, fix them.

(l) For the center hydraulic system, turn the applicable switch on the hydraulic system control panel (P5) to the OFF position:

1) HYDRAULIC PRIMARY C1 ELEC

2) HYDRAULIC PRIMARY C2 ELEC

(3) Test Procedure:

(a) Make sure page 2 of the Flight Controls Maintenance Pages is showing. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 1 for illustration of this screen.

WARNING: KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(b) Start the applicable Central Maintenance Computing Function (CMCF) ground test: 27 Primary Flight Control System, LRU Replacement, Left or Right Aileron Major Rig. Refer to 787 AMM 45-11-00 Start a Ground Test - Software Operation as an accepted procedure.

(c) After the test starts, continue through the test procedure until the GROUND TESTS screen shows the following. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 2 for illustration of this screen.

"The surface may now be ramped through 20 warm up/bleed cycles"

(d) Prepare to monitor the DELTA PRESS readout for the aileron inboard PCU on Page 2 of the Flight Controls Maintenance Pages. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 1 for illustration of this screen.

(e) On the GROUND TESTS screen, select the SKIP WARMUP AND BLEED and then click the CONTINUE buttons. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 2 for illustration of this screen.

(f) When the DELTA PRESS for the aileron inboard PCU is between -4400 psi and -5500 psi on Page 2 of the Flight Controls Maintenance Pages, push the STOP TEST button on the GROUND TESTS screen.

NOTE: A warning screen will show, do not push any additional buttons at this time.

(g) Make sure the DELTA PRESS readout for the aileron inboard PCU on Page 2 of the Flight Controls Maintenance Pages remains between -4400 psi and -5500 psi.

CAUTION: IF YOU DO NOT OBEY THIS STEP CORRECTLY, YOU WILL HAVE TO RE-RIG THE SURFACE.

1) If the GROUND TESTS screen shows "Select position adjustments below until the aileron being rigged is at the external alignment feature", the STOP TEST button was not pushed in time. Refer to Data Module Appendix G, SB B787-A-27-00-0026-0GA-931D-D Figure 3 for illustration of this screen. Push the STOP TEST button and start the Test Procedure again. Do not push CONTINUE on this GROUND TESTS screen. If you push CONTINUE, you will need to re-rig the surface.

2) If the DELTA PRESS is not between -4400 psi and -5500 psi, Push the STOP TEST button on the GROUND TESTS screen and start the Test Procedure again.

(h) RC - Close the ball valve on tool TSF036Z0229.

(i) RC - Read and record the flow through the indicator of tool TSF036Z0229 ten or more minutes after the ball valve is closed.

(j) Open the ball valve on tool TSF036Z0229.

(k) Push the STOP TEST button on the GROUND TESTS warning screen.

(4) Remove the tool:

(a) Make sure the center hydraulic system and reservoir is depressurized. Refer to 787 AMM 27-11-19 Aileron Power Control Unit Removal, as an accepted procedure.

(b) Make sure the FLIGHT CONTROL SURFACE switch for the WINGS is in the LOCK position and a DO NOT OPERATE tag is installed. Refer to 787 AMM 27-11-19 Aileron Power Control Unit - Removal, as an accepted procedure.

(c) Remove FCE cabinet power.

1) Open these circuit breakers and lock with DO NOT CLOSE tags on the CBIC panel:

Table 10

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(d) RC - Disconnect and remove tool TSF036Z0229 between the aileron inboard PCU and the rear spar.

(e) RC - Install the kept hydraulic return line between the aileron inboard PCU and rear spar. Refer to 787 AMM 20-10-09 Tube Assembly - Flareless - Installation as an accepted procedure.

(f) Supply FCE cabinet power.

1) Unlock these DO NOT CLOSE tags and close these circuit breakers on the CBIC panel:

Table 11

Designation	CB
FCE CABINET-C1 BACKUP	CE2709811
FCE CABINET-L BACKUP	CE2709831
FCE CABINET-C2 BACKUP	CE2709821
FCE CABINET-R BACKUP	CE2709841

(g) Put the FLIGHT CONTROL SURFACE switch for the WINGS in the NORM position and remove the DO NOT OPERATE tag. Refer to 787 AMM 27-11-19 Aileron Power Control Unit - Removal, as an accepted procedure.

(h) Do these steps to pressurize the hydraulic system and inspect the hydraulic return line to aileron inboard PCU connection for leaks where the tool was installed:

1) Pressurize the center hydraulic system. Refer to 787 AMM 29-11-00 as an accepted procedure.

2) Operate the ailerons. Do these steps 7 times:

a) Use the flight controls synoptic page to make sure that the ailerons moves fully.

b) Turn the control wheel from the neutral position to fully right.

c) Turn the control wheel from fully right to fully left.

d) Turn the control wheel from fully left to the neutral position.

3) Do a detailed visual inspection for hydraulic fluid leaks at the aileron inboard PCU hydraulic return line connections. If leaks are found, fix them.

(i) Close access to the aileron PCUs:

1) For WORK PACKAGE 7, close panel 561YB and 561ZB - Wing Lower Fixed Trailing Edge Panel. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Installation as an accepted procedure.

2) For WORK PACKAGE 8, close panel 661YB and 661ZB - Wing Lower Fixed Trailing Edge Panel. Refer to 787 AMM 57-51-10 Wing Trailing Edge Panel - Installation as an accepted procedure.

Group 1, Configuration 2; Group 2:

O. PART 7: REPLACE THE POWER CONTROL UNIT

(1) RC - For WORK PACKAGE 5, replace the left elevator inboard power control unit. Refer to 787 AMM 27-31-09 as an accepted procedure.

(2) RC - For WORK PACKAGE 6, replace the right elevator inboard power control unit. Refer to 787 AMM 27-31-09 as an accepted procedure.

(3) RC - For WORK PACKAGE 7, replace the left aileron inboard power control unit. Refer to 787 AMM 27-11-19 as an accepted procedure.

(4) RC - For WORK PACKAGE 8, replace the right aileron inboard power control unit. Refer to 787 AMM 27-11-19 as an accepted procedure.

Alert Service Bulletin B787-81205-SB270026-00

Appendix A – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 5 LEFT, RIGHT AND CENTER HYDRAULIC SYSTEM FLUID MARKER 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-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test

Procedure

Group 1-2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

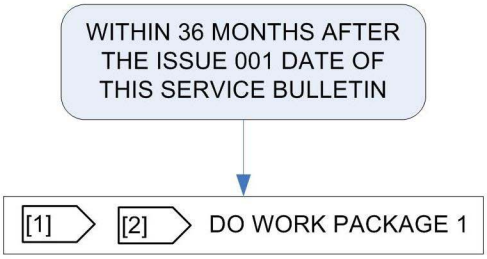
Title	Description
WORK PACKAGE 1	MARKER INSTALLATION

The table below gives the description for the flag notes called out in the logic diagram.

Table 2 Flag Notes

Flag Note	More Data
[1]	No further action required for Group 1, Configuration 1 after WORK PACKAGE 1 is done. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00. (TERMINATING ACTION)
[2]	No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Appendix A, B, C and D. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00. (TERMINATING ACTION)

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 5 LEFT, RIGHT AND CENTER HYDRAULIC SYSTEM FLUID MARKER INSTALLATION



2351290

ICN-B787-A-000061-A-81205-09066-A-01-1

Figure 1

Alert Service Bulletin B787-81205-SB270026-00

Appendix B – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 6 LEFT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test

Procedure

Group 1, Configuration 2; Group 2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

Title	Description
WORK PACKAGE 2	LEFT HYDRAULIC SYSTEM FLUID TEST
PART 2	CYCLE HYDRAULIC FLUID
PART 3	HYDRAULIC FLUID TEST
PART 4	REPLACE HYDRAULIC FLUID
CONDITION 1	PASSES THE HYDRAULIC FLUID TEST
CONDITION 2	DOES NOT PASS THE HYDRAULIC FLUID TEST

The table below gives the description for the flag notes called out in the logic diagram.

Table 2 Flag Notes

Flag Note	More Data
[1]	It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.
[2]	No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Appendix A, B, C and D. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00. (TERMINATING ACTION)
[3]	CONDITION 2 (ACTION 2) can be done any time between CONDITION 2 (ACTION 1) and the Compliance Time.

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 6 LEFT HYDRAULIC SYSTEM FLUID TEST

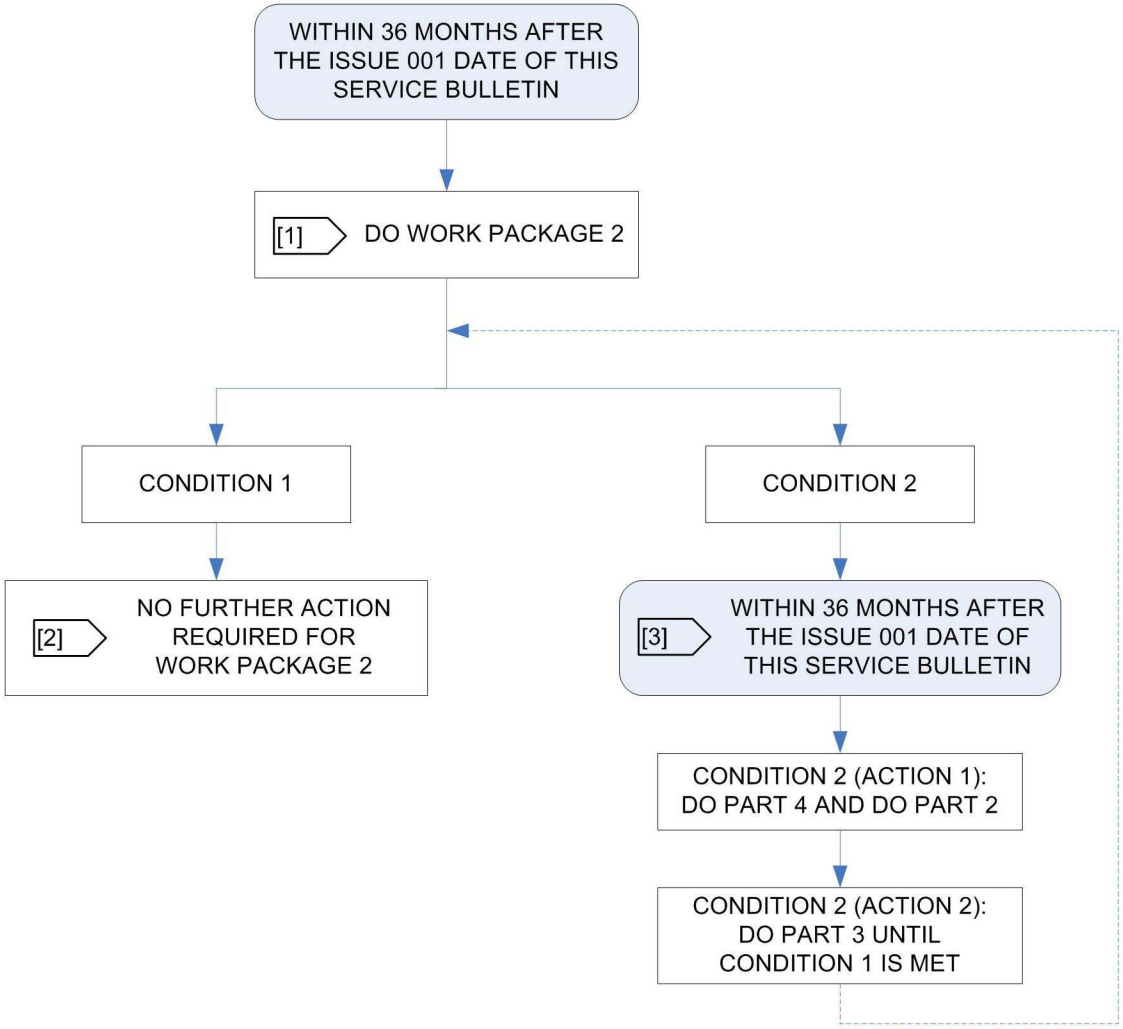


Figure 1

Alert Service Bulletin B787-81205-SB270026-00

Appendix C – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 7 RIGHT HYDRAULIC SYSTEM FLUID TEST [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test

Procedure

Group 1, Configuration 2; Group 2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

Title	Description
WORK PACKAGE 3	RIGHT HYDRAULIC SYSTEM FLUID TEST
PART 2	CYCLE HYDRAULIC FLUID
PART 3	HYDRAULIC FLUID TEST
PART 4	REPLACE HYDRAULIC FLUID
CONDITION 3	PASSES THE HYDRAULIC FLUID TEST
CONDITION 4	DOES NOT PASS THE HYDRAULIC FLUID TEST

The table below gives the description for the flag notes called out in the logic diagram.

Table 2 Flag Notes

Flag Note	More Data
[1]	It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.
[2]	No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Appendix A, B, C and D. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00. (TERMINATING ACTION)
[3]	CONDITION 4 (ACTION 2) can be done any time between CONDITION 4 (ACTION 1) and the Compliance Time.

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 7 RIGHT HYDRAULIC SYSTEM FLUID TEST

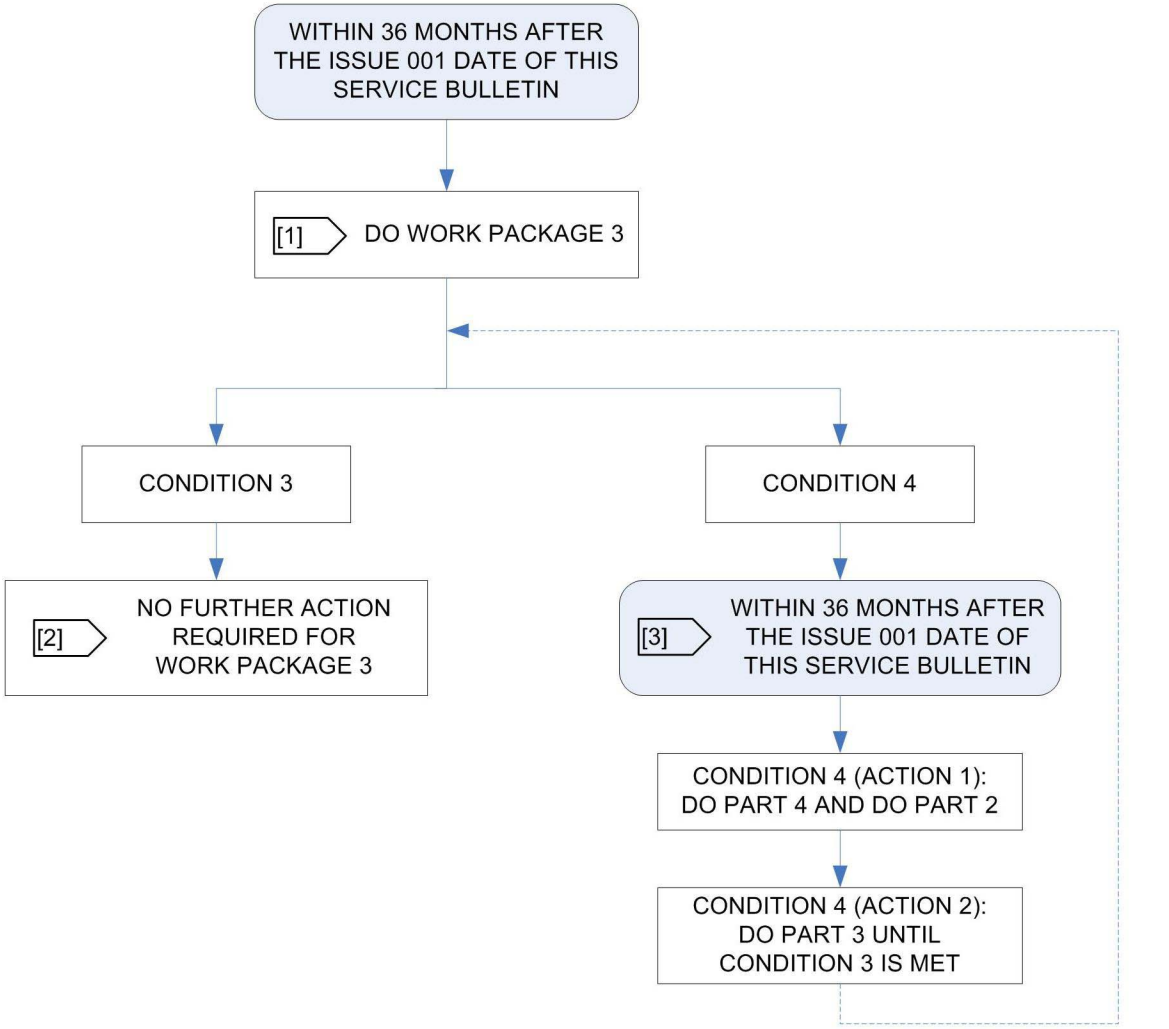


Figure 1

Alert Service Bulletin B787-81205-SB270026-00

Appendix D – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 8 CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions
SB B787-81205-SB270016-00	FLIGHT CONTROLS - Elevator Control System - Elevator Power Control Unit Electro-Hydraulic Servo Valve Rate Restriction Test

Procedure

Group 1, Configuration 2; Group 2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

Title	Description
WORK PACKAGE 4	CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST
WORK PACKAGE 5	LEFT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST
WORK PACKAGE 6	RIGHT ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST
WORK PACKAGE 7	LEFT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST
WORK PACKAGE 8	RIGHT AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST

Table 1 Description Table

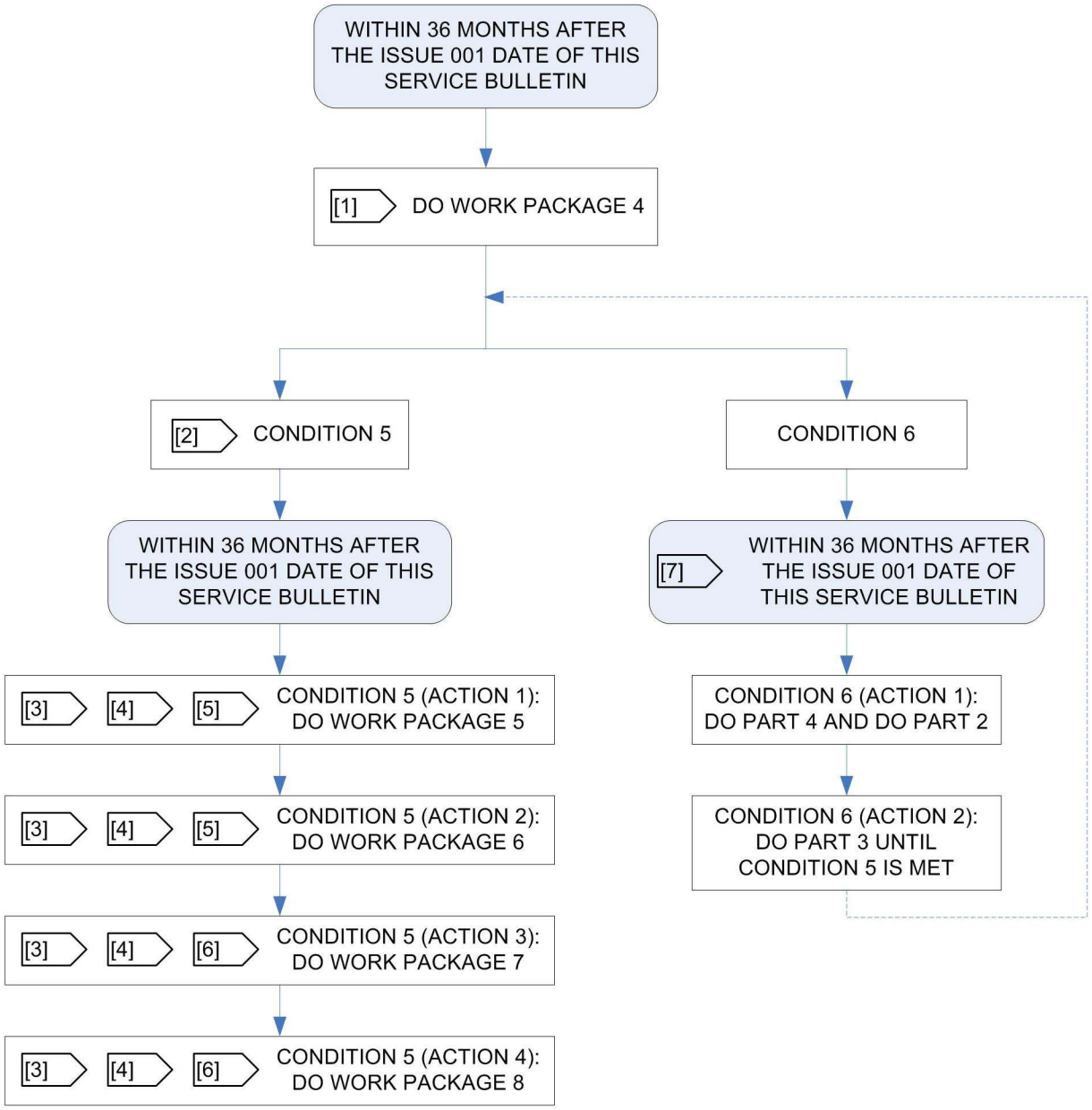
Title	Description
PART 2	CYCLE HYDRAULIC FLUID
PART 3	HYDRAULIC FLUID TEST
PART 4	REPLACE HYDRAULIC FLUID
CONDITION 5	PASSES THE HYDRAULIC FLUID TEST
CONDITION 6	DOES NOT PASS THE HYDRAULIC FLUID TEST

The table below gives the description for the flag notes called out in the logic diagram.

Table 2 Flag Notes

Flag Note	More Data
[1]	It is acceptable to put the airplane back to a serviceable condition and return the airplane to service before the test results are received.
[2]	CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) can be done in any sequence. It is acceptable to put the airplane back to a serviceable condition and return the airplane to service after each action independently.
[3]	No further action required for WORK PACKAGE 4 after CONDITION 5 (ACTION 1) thru CONDITION 5 (ACTION 4) are done.
[4]	No further action required for Group 1, Configuration 2 and Group 2 after WORK PACKAGE 1 thru WORK PACKAGE 4 are done. See Appendix A, B, C and D. Accomplishment of this service bulletin terminates SB B787-81205-SB270016-00. (TERMINATING ACTION)
[5]	See Appendix E for disposition of WORK PACKAGE 5 and WORK PACKAGE 6 conditions and actions.
[6]	See Appendix F for disposition of WORK PACKAGE 7 and WORK PACKAGE 8 conditions and actions.
[7]	CONDITION 6 (ACTION 2) can be done any time between CONDITION 6 (ACTION 1) and the Compliance Time.

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 8 CENTER HYDRAULIC SYSTEM FLUID TEST AND LEFT AND RIGHT ELEVATOR AND AILERON POWER CONTROL UNIT INTERNAL FLOW TEST



ICN-B787-A-000061-A-81205-09069-A-01-1

Figure 1

Alert Service Bulletin B787-81205-SB270026-00

Appendix E – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 9 WORK PACKAGE 5 AND WORK PACKAGE 6 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions

Procedure

Group 1, Configuration 2; Group 2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

   The Conditions, Actions and Compliance times shown in Appendix E apply to each WORK PACKAGE, 5 and 6, independently.

   The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

Title	Description
PART 5	ELEVATOR INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST
PART 7	REPLACE THE POWER CONTROL UNIT
CONDITION 5.1	THE ELEVATOR INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE
CONDITION 5.2	THE ELEVATOR INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

Table 1 Description Table

Title	Description
CONDITION 5.2.1	THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.560 GALLONS PER MINUTE
CONDITION 5.2.2	THE INTERNAL FLOW THROUGH THE ELEVATOR INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.560 GALLONS PER MINUTE

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 9 WORK PACKAGE 5 AND WORK PACKAGE 6 CONDITIONS AND ACTIONS

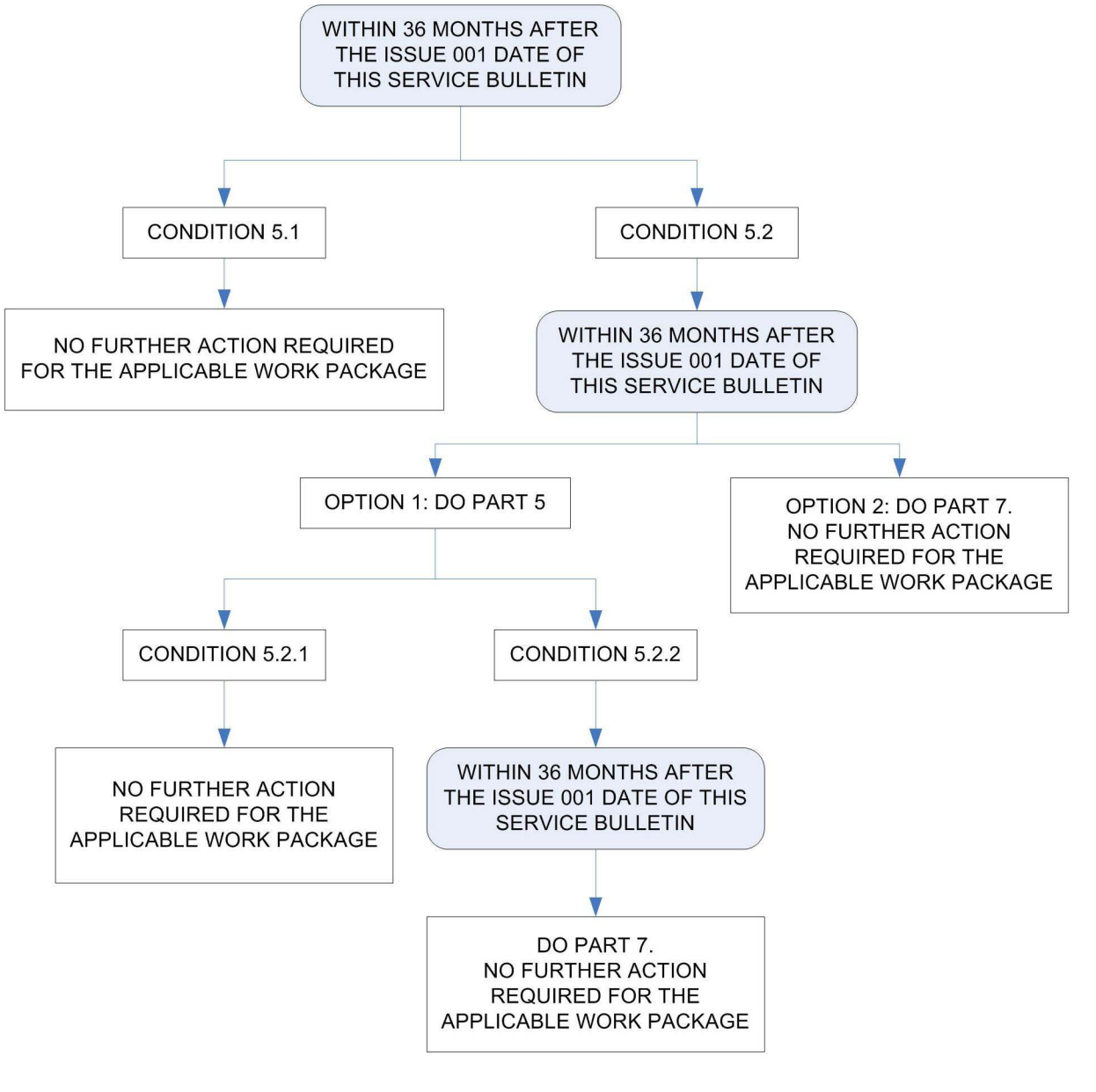


Figure 1

Alert Service Bulletin B787-81205-SB270026-00

Appendix F – LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 10 WORK PACKAGE 7 AND WORK PACKAGE 8 CONDITIONS AND ACTIONS [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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-27-00-0026-00A-932A-D Issue 001, Paragraph 5.	Compliance
SB B787-A-27-00-0026-00A-933A-D Issue 001, Step 2.	Work Instructions

Procedure

Group 1, Configuration 2; Group 2:

1. NOTE: Logic diagrams are provided as an aid only. Information contained in Data Module SB B787-A-27-00-0026-00A-932A-D, Paragraph 5., Compliance, is the primary source for compliance times. Information in Data Module SB B787-A-27-00-0026-00A-933A-D, Step 2., Work Instructions, is the primary source for tasks required for compliance.

   The Conditions, Actions and Compliance times shown in Appendix F apply to each WORK PACKAGE, 7 and 8, independently.

   The table below gives the description for the parts and conditions called out in the logic diagram.

Table 1 Description Table

Title	Description
PART 6	AILERON INBOARD POWER CONTROL UNIT INTERNAL FLOW TEST
PART 7	REPLACE THE POWER CONTROL UNIT
CONDITION 5.3	THE AILERON INBOARD POWER CONTROL UNIT HAS LESS THAN 300 FLIGHT HOURS IN SERVICE
CONDITION 5.4	THE AILERON INBOARD POWER CONTROL UNIT HAS 300 FLIGHT HOURS OR MORE IN SERVICE

Table 1 Description Table

Title	Description
CONDITION 5.4.1	THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS GREATER THAN OR EQUAL TO 0.094 GALLONS PER MINUTE AND IS LESS THAN OR EQUAL TO 0.297 GALLONS PER MINUTE
CONDITION 5.4.2	THE INTERNAL FLOW THROUGH THE AILERON INBOARD POWER CONTROL UNIT IS LESS THAN 0.094 GALLONS PER MINUTE OR IS GREATER THAN 0.297 GALLONS PER MINUTE

LOGIC DIAGRAM FOR PARAGRAPH 1.E. COMPLIANCE: TABLE 10 WORK PACKAGE 7 AND WORK PACKAGE 8 CONDITIONS AND ACTIONS

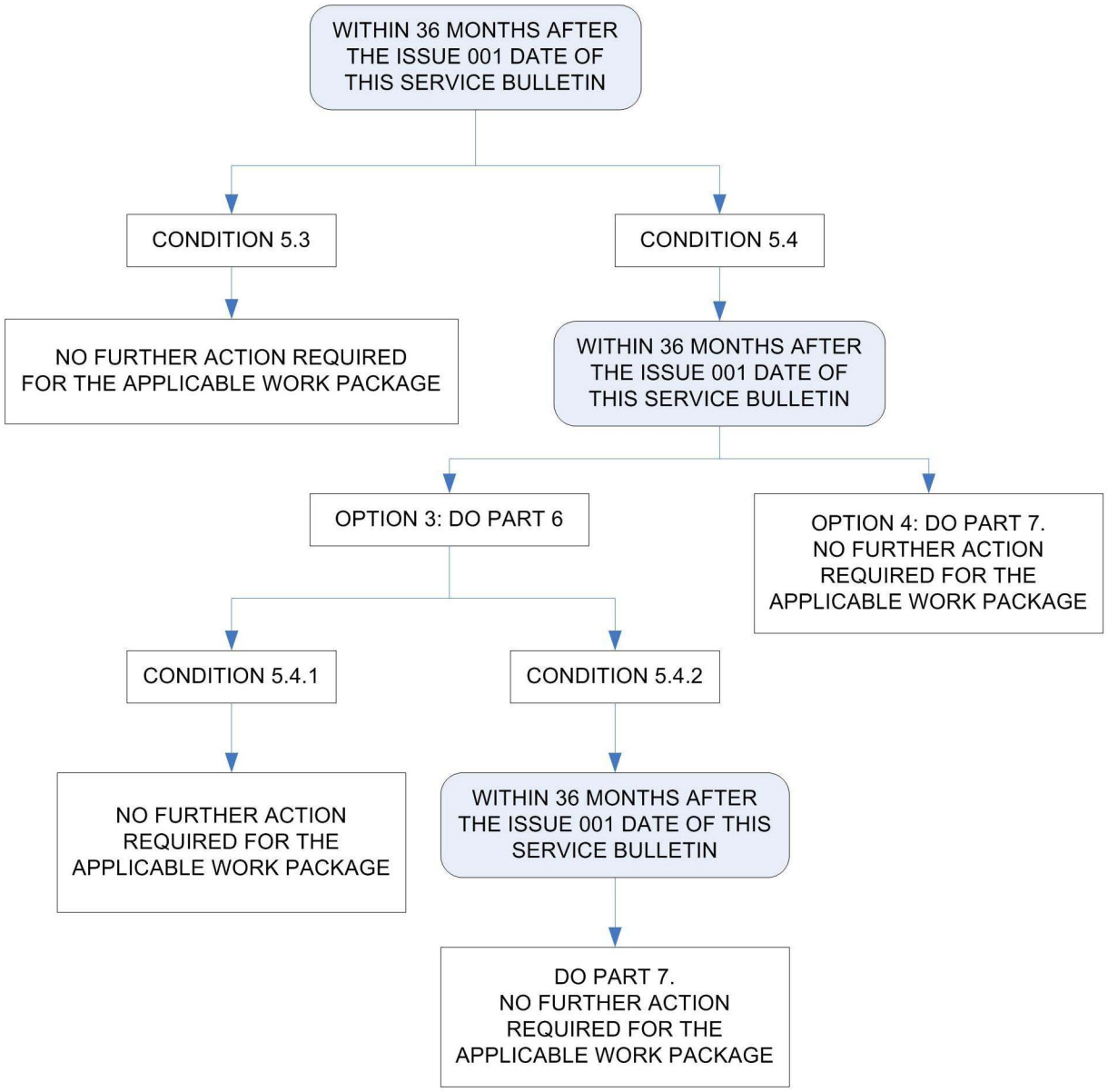


Figure 1

Alert Service Bulletin B787-81205-SB270026-00

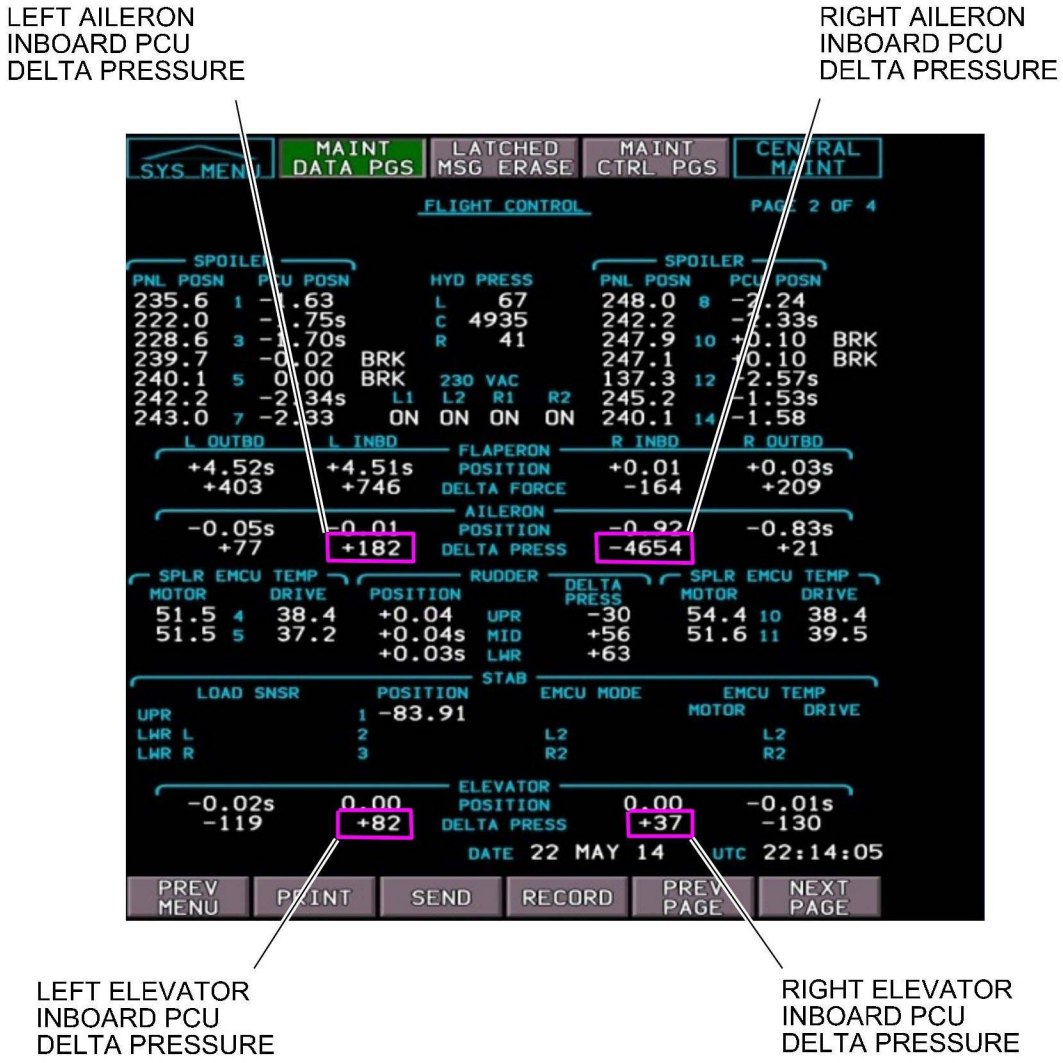
Appendix G – TEST SCREENS [Group 1, Configuration 2; Group 2:]

Alert: THIS ALERT SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN DATA MODULE SB B787-A-27-00-0026-00A-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, Configuration 2; Group 2:

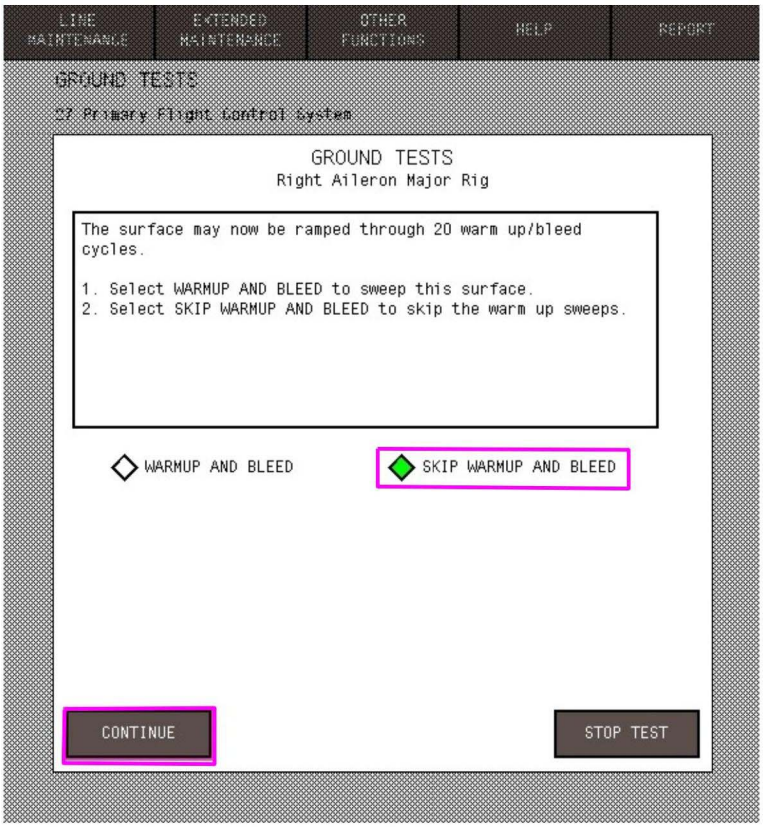
1.



2373183

ICN-B787-A-000061-A-81205-09072-A-01-1

Figure 1 FLIGHT CONTROL MAINTENANCE PAGES - PAGE 2



2353073

ICN-B787-A-000061-A-81205-09073-A-01-1

Figure 2 GROUND TESTS - SKIP WARMUP AND BLEED SCREEN (TYPICAL - RIGHT AILERON SHOWN)

2353074

ICN-B787-A-000061-A-81205-09074-A-01-1

Figure 3 GROUND TESTS - SURFACE WILL MOVE SCREEN (TYPICAL - RIGHT AILERON SHOWN)