BOMBARDIER

LEARJET 60
RECOMMENDED
SBT 60-78-7

SERVICE BULLETIN
REVISION TRANSMITTAL SHEET

This page transmits Revision 2 to Service Bulletin 60-78-7, "Installation of Thrust Reverser Interface Box."

Rework:

No rework is required for aircraft which have complied with previous issues of this Service Bulletin.

Reason:

Revised the planning information as follows:

In paragraph 1.H., moved the wheel speed detect box assembly information from the material required table to the other materials necessary table.

In paragraph 1.H., moved T/R interface box information from the material required table to the other materials necessary table.

Added paragraph 1.H.(1), other material/parts necessary to do this service bulletin table.

In paragraph 1.H.(1), added wheel speed detect box assembly information to the table.

In paragraph 1.H.(1), added T/R interface box information to the table.

In paragraph 1.H.(1), revised the note to add the phone number for customers outside of North America.

In paragraph 1.H.(1), added a note for the alternate part number for the wheel speed detect box assembly.

Revised the accomplishment information as follows:

In Figure 1, sheet 1 of 3, added the alternate part number for the wheel speed detect box.

In Figure 1, sheet 1 of 3, changed the ground plug callout from 148C to 148E.

In Figure 2, sheet 1 of 2, changed the ground plug callout from 148C to 148E in wire diagram.

In Figure 2, sheet 1 of 2, changed the electrical code from 148C to 148E in flagnote 5.

In Figure 2, sheet 2 of 2, changed the ground plug callout from 148C to 148E in wire diagram.

Revised material information as follows:

In paragraph 3.A.(1), changed wire specification for C98B22 wire from M27500-22SD-3T23 to M27500-22SD-2T23.

In paragraph 3.B., added alternate part number for the wheel speed detect box assembly to the parts removed list table.

Filing Instructions:

This is a COMPLETE revision. Remove and discard all pages of the prior issue and replace with pages of Revision 2.

Record of Revisions:

ISSUE	DISTRIBUTION DATE
Basic	Feb 21/05
Revision 2	May 1/06

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SERVICE BULLETIN

To ensure proper compliance with this Service Bulletin, owners and operators of affected aircraft modified by STC should contact the STC holder or their regional FAA office for additional information and disposition.

CONTACT INFORMATION	DISTRIBUTION DATE	REV. NO.
Business Aircraft Learjet Inc. MS 53 P.O. Box 7707 Wichita, Kansas 67277-7707 (316) 946-2421	May 1, 2006	2

EXHAUST - INSTALLATION OF THRUST REVERSER INTERFACE BOX

1. Planning Information

A. Effectivity

(1) Learjet 60-002 thru 60-276.

NOTE: On applicable aircraft, Learjet Service Bulletin 60-27-6, "Installation of Autospoiler-Wheel Speed Detection System" must be performed prior to or in conjunction with this Service Bulletin. Owners and operators should check the Service Bulletin effectivity against their aircraft serial number to determine if their aircraft is impacted.

B. Reason

(1) To install a wheel speed input to the thrust reverser system to reduce the possibility of inadvertent stowing during thrust reverser operation.

C. Description

(1) This bulletin modifies the aircraft as follows.

(a) Installs brackets to secure thrust reverser interface box.

(b) Installs thrust reverser interface box.

(c) Modifies wiring for the new thrust reverser interface box.

D. Compliance

(1) Recommended - It is recommended that this Service Bulletin be complied with no later than the next 600 flight hours or within 12 months from the original distribution date of this Service Bulletin, February 21, 2005.

E. Approval

(1) FAA approval has been obtained on technical data in this publication that affects airplane type design.

(2) EASA approval has been obtained on technical data in this publication that affects airplane type design.

F. Labor Hours - Estimated Accomplishment Time

-801 KIT	TASK
5.0	Labor hours to gain access to affected area.
25.0	Labor hours to modify aircraft.
20.0	Labor hours to functional test/operational check.
15.0	Labor hours to restore aircraft to airworthy status.
65.0	Total Labor Hours

NOTE: The above labor hour estimate is for planning purposes only. Facility and/or personnel capabilities may cause actual accomplishment time to vary significantly.

G. Expense Coverage

(1) Labor Coverage

(a) *Aircraft in service 0-5 years* - 100% coverage.

(b) *Aircraft in service years 6 thru 8* - 50% coverage.

(c) *Aircraft in service years 9 thru 12* - 25% coverage.

(2) Material Coverage

(a) *Aircraft in service 0-5 years* - 100% coverage.

(b) *Aircraft in service years 6 thru 8* - 50% coverage.

(c) *Aircraft in service years 9 thru 12* - 25% coverage.

(3) Smart Parts - Smart Parts Plus does not pay for the materials during or after the free period for those aircraft in service 0-5 years at the time of service bulletin distribution. For those aircraft in service greater than 5 years at the time of service bulletin distribution Smart Parts Plus pays for the chargeable portion of the materials in accordance with the above prorated table applicable to the aircraft at the time of service bulletin distribution.

H. Material Required to Accomplish Service Bulletin.

PART NUMBER	QTY	NOMENCLATURE	PRICING
6081046-801	1	Service Bulletin Kit	$ 1,154.00

NOTE: The above selling price is subject to change without notice.

(1) Other material/parts necessary to do this service bulletin.

PART NUMBER	QTY	NOMENCLATURE	NOTES
6018366-005 *	1	Box Assembly, Wheel Speed Detect (E410)	(** See Note Below)
6018003-001	1	T/R Interface Box (E465)	(** See Note Below)

NOTE: * 6081044-805 is a spare for 6018366-005.

** The wheel speed detect box assembly and T/R interface box are rotatable components. Contact Bombardier Aerospace Parts Logistics Business Aircraft Customer Service at 1-888-222-1428 in North America or 1-316-946-2377 outside North America for information for availability and pricing.

To place an order for these parts, please call Bombardier Aerospace Parts Logistics Business Aircraft Customer Service at 1-888-222-1428 in North America or 1-316-946-2377 outside North America for information.

I. Tooling

(1) Acquire the necessary tools and equipment.

NAME	PART NUMBER	QTY	MANUFACTURER	USAGE
External Hydraulic Power Source (1500 PSI)		1	Obtain Locally	Drive T/Rs and Spoilers
Squat Switch Simulator Sticks		2	Fabricate	Close squat switch.
Ground Power Unit	GPU	1		
Spoiler Cage	TN61341	2	Learjet Inc. Wichita, KS	Protect personnel from spoilers.
Stopwatch		1	Commercially Available	General
Spin Adapter	2571004-1	1	Learjet Inc. Wichita, KS	To adapt the drill to the transducer.
Drill Motor (two [2] Reqd.)(Speeds of 1700 to 2000 rpm.)		2	Commercially Available	To simulate aircraft ground speed.

J. Weight and Balance
(1) Change in basic weight and moment.

CHANGE IN BASIC WEIGHT	CHANGE IN BASIC MOMENT
Plus (+) 1.35 pounds	Plus (+) 488.2 inch-pounds

K. References
(1) Learjet Maintenance Manual, Chapters 7, 12, 24, 25, 27, and 29.
(2) Learjet Wiring Manual, Chapter 20.

L. Other Publications Affected
(1) Learjet Illustrated Parts Catalog, Chapter 27.
(2) Learjet Wiring Manual, Chapters 27, 32, and 78.

2. Accomplishment Instructions

A. Gain Access
(1) Jack the aircraft so that the landing gear clears the ground. (Refer to Learjet Maintenance Manual, Chapter 7.)
(2) Set battery switch(es) off and disconnect aircraft batteries.
(3) Open aft cabin baggage compartment closet door.

NOTE: If removal of closet door is preferred, refer to Learjet Maintenance Manual, Chapter 25.

(4) The aft cabin baggage compartment floor liner panel is secured by hook and loop fasteners on all edges.
(5) Pull to release hook and loop fasteners and remove floor liner panel from aircraft.
(6) Remove all attaching hardware from left side liner panel assembly.
(7) Remove left side liner panel assembly from aircraft.

B. Modification of Aircraft
(1) Remove the wheel speed detect box assembly (E410) from the aircraft. Retain attaching hardware. (Refer to Learjet Maintenance Manual, Chapter 27.)
(2) Return wheel speed detect box assembly (E410) to Learjet. (Refer to paragraph 3.B for return shipping information.)
(3) Install new wheel speed detect box assembly (E410) to aircraft with retained hardware.
(4) Determine location of 6018004-803 bracket to stringer 10L as follows:
(a) Position and clamp bracket to stringer 10L. (See Figure 1.)
(b) Using a 0.1250 inch [3.18 mm] drill bit, drill six (6) fastener holes through bracket and stringer 10L.
(5) Determine location of 6018004-804 bracket to stringer 11L as follows:
(a) Position and clamp bracket to stringer 11L. (See Figure 1.)
(b) Using a 0.1250-inch [3.18 mm] drill bit, drill six (6) fastener holes through bracket and stringer 11L.

(6) Position the T/R Interface box on 6018004-803 and 6018004-804 brackets and clamp in place. (See Figure 1.)
(7) Mark T/R Interface box mounting hole pattern on the 6018004-803 and 6018004-804 brackets.
(8) Ensure proper edge distances and that locations are not in bend radius of brackets.
(9) Remove T/R Interface box from brackets.
(10) Remove 6018004-803 and 6018004-804 brackets from stringers.
(11) Drill No. 12 (.189 diameter) hole at marked location on 6018004-803 and 6018004-804 brackets.
(12) Deburr holes on both sides of the brackets.
(13) Deburr holes drilled in stringers 10L and 11L.
(14) Install nutplates to new 6018004-803 and 6018004-804 brackets as follows.
  (a) Position nutplate to bracket and mark nutplate fastener hole locations.
  (b) Drill fastener holes in brackets.
  (c) Electrically bond nutplate to brackets, (Refer to Learjet Wiring Manual, Chapter 20.)
  (d) Install nutplate to bracket using MS20426AD3-2 rivets.
(15) Install 6018004-803 bracket to stringer 10L as follows.
  (a) Electrically bond all holes drilled. (Refer to Learjet Wiring Manual, Chapter 20.)
  (b) Clean stringer 10L and the 6018004-803 bracket using MPK or equivalent and cheesecloth.
  (c) Wipe remaining MPK from stringer 10L and bracket using lint-free cloth.
  (d) Secure the 6018004-803 bracket to stringer 10L using MS20470AD4-3 rivets. (See Figure 1.)
(16) Install 6018004-804 bracket to stringer 11L as follows.
  (a) Electrically bond all holes drilled. (Refer to Learjet Wiring Manual, Chapter 20.)
  (b) Clean stringer 11L and the 6018004-804 bracket using MPK or equivalent and cheesecloth.
  (c) Wipe remaining MPK from stringer 11L and bracket using lint-free cloth.
  (d) Secure the 6018004-804 bracket to stringer 11L using MS20470AD4-3 rivets. (See Figure 1.)
(17) Install T/R Interface box to bracket with MS27039-0806 screws. (See Figure 1.)
(18) Modify aircraft wiring. (See Figure 2.)

NOTE: Route the new wiring with the existing wire bundle.

Permissible to secure new wiring to existing wiring using tie wraps at each clamp location. (See Figure 2.)

C. Perform Functional Test/Operational Check
(1) Functional Test - Model 60 Thrust Reverser with Wheel Speed Detect Interface - Ground Test
  (a) PRE-TEST PROCEDURE FOR T/R GROUND TESTS ENGINES NOT RUNNING
    1) Place the aircraft on jacks. (Refer to Learjet Maintenance Manual, Chapter 7)
    2) Release the parking brake.
    3) Connect the electrical ground power cart. (Refer to Learjet Maintenance Manual, Chapter 24.)
    4) Connect the hydraulic ground power cart. (Refer to Learjet Maintenance Manual, Chapter 29.

NOTE: The following thrust reverser operating checks are performed with the engines not running and system hydraulic power supplied by a hydraulic mule. A suitable AC outlet must be available to power the Hydraulic Mule.

5) Insert squat switch simulator sticks into the right and left squat switches (S1 thru S4) to simulate ground mode (weight on wheels).
6) Set the T/R Cont, Auto Stow, Warn. Lts., EEC and Squat Switch Circuit Breakers.

(b) RT SQUAT SWITCH FIRST OFF GROUND
1) Deploy one thrust reverser at a time, waiting for the hydraulic power cart to re-stabilize at full pressure between T/R deployments.
2) With both thrust reversers deployed, set the right squat switch to the flight mode and verify the following.
   a) Assure that a major engine fault (amber lamp) for each engine is set.
   b) The amber engine fault lamps will remain ON through step 2.C.1.(e).5).
   c) Assure that both thrust reversers stow and that the armed lamps flash until both thrust reversers are stowed, and extinguish when the thrust reversers are stowed.
3) Set the left squat switch to the flight mode.
4) Assure that a minor engine fault (white lamp) for each engine is set.
5) The white engine fault lamps will also remain ON through step 2.C.1.(e)5).

(c) RT SQUAT SWITCH FIRST LANDING
1) Set the left thrust reverser lever to STOW.
2) Set the right squat switch to ground mode.
3) Assure that both thrust reversers remain stowed.
4) Set the left squat switch to ground mode.
5) Verify that the right thrust reverser deploys.

(d) LT SQUAT SWITCH FIRST OFF GROUND
1) With the right thrust reversers deployed, set the left squat switch to the flight mode.
2) Assure that the right thrust reverser stows and that the armed lamp flashes until the thrust reverser is stowed, and extinguish when thrust reverser is stowed.
3) Set the right squat switch to the flight mode.

(e) LT SQUAT SWITCH FIRST LANDING
1) Set the left squat switch to ground mode.
2) Verify that both thrust reversers remain stowed.
3) Set the right thrust reverser lever to STOW.
4) Set the left thrust reverser lever to DEPLOY.
5) Set the right squat switch to ground mode.
6) Verify that the left thrust reverser deploys.
7) Set the left thrust reverser lever to STOW.
8) Verify that the left thrust reverser begins to stow.
9) Verify the left TR DEPLOY annunciator extinguishes and the left engine T/R UNLOCK annunciator illuminates during transition.
10) Verify after the left thrust reverser is fully stowed, that the left engine T/R UNLOCK annunciator extinguishes and both T/R ARM annunciators remain illuminated.

(f) THRUST REVERSER WHEEL SPEED INTERFACE GROUND TEST ENGINES NOT RUNNING.
1) Verify the aircraft is on jacks with the nose and main gear clearing the ground in the DOWN position.
2) Verify the parking brake is in the released position.
3) Set BATTERY 1 and BATTERY 2 switches OFF.

4) If not previously accomplished remove the hubcap from each wheel, exposing each wheel speed transducer.
5) Verify the left and right squat switches are set to the ground mode.

WARNING: KEEP CLEAR OF THE THRUST REVERSERS AT ALL TIMES. THE THRUST REVERSERS MAY OPEN OR CLOSE AT ANY TIME WITHOUT WARNING, WHEN HYDRAULIC POWER IS AVAILABLE.

6) Apply electrical ground power to the aircraft. (Refer to Learjet Maintenance Manual, Chapter 24.)
7) Apply hydraulic ground power to the aircraft. (Refer to Learjet Maintenance Manual, Chapter 29.)
8) Verify hydraulic pressure is normal (1500 - 1550 PSI).
9) Set both throttles to the idle position.
10) Verify both green T/R ARM annunciators are illuminated and the SPOILER MON annunciator is extinguished.
11) Set the spoiler lever to the ARM position.
12) Verify the green SPOILER ARMED annunciator is illuminated.
13) Set both squat switches to the flight mode.
14) Verify both green T/R ARM annunciators extinguish.
15) Rotate the SYSTEM TEST switch to the SPOILER RESET position and press the TEST button. Upon release verify the left and right T/R ARM annunciators do not illuminate.
16) Allow the left and right squat switches to remain in flight mode for 3 minutes minimum.
17) Set the Left and Right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
18) Move the left thrust reverser lever to DEPLOY.
19) Verify that when the left thrust reverser is fully deployed, the left T/R DEPLOY annunciator illuminate and the left T/R UNLOCK annunciator extinguishes.
20) Spin the left outboard and right outboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

21) Within 40 seconds after setting the squat switches to ground mode, set the right squat switch to flight mode and stop the stopwatch while continuing to spin the left outboard and right outboard wheel speed transducers.
22) Verify the left thrust reverser remains deployed.
23) Stop spinning the left outboard wheel speed transducer.
24) Verify the left thrust reverser remains deployed.
25) Stop spinning the right outboard wheel speed transducer.
26) Verify after a 2 ± 1 second delay, the left thrust reverser begins to stow.
27) Verify the left thrust reverser is fully stowed.
28) Set the left thrust reverser lever to STOW.
29) Allow the left and right squat switches to remain in flight mode for 3 minutes minimum.

30) Set the left and right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
31) Set the right thrust reverser lever to DEPLOY.
32) Verify that when the right thrust reverser is fully deployed, the right T/R DEPLOY annunciator illuminates and the right T/R UNLOCK annunciator extinguishes.
33) Spin the left outboard and right outboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

34) Within 40 seconds of setting the squat switches to ground mode set the right squat switch to flight mode and stop the stopwatch while continuing to spin the left outboard and right outboard wheel speed transducers.
35) Verify the right thrust reverser remains deployed.
36) Stop spinning the left outboard wheel speed transducer.
37) Verify the right thrust reverser remains deployed.
38) Stop spinning the right outboard wheel speed transducer.
39) Verify after a 2 ± 1 second delay, the right thrust reverser begins to stow.
40) Verify the right thrust reverser fully stows.
41) Set the right thrust reverser lever to STOW position.
42) Set the left squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.
43) Set the left and right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
44) Move the left thrust reverser lever to DEPLOY.
45) Verify that when the left thrust reverser is fully deployed, the left T/R DEPLOY annunciator illuminates and the left T/R UNLOCK annunciator extinguishes.
46) Spin the left outboard and right outboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

47) Within 40 seconds of setting the squat switches to ground mode, set the right squat switch to flight mode and stop the stopwatch while continuing to spin the left outboard and right outboard wheel speed transducers.
48) Verify the left thrust reverser remains deployed.
49) Stop spinning the right outboard wheel speed transducer.
50) Verify the left thrust reverser remains deployed.
51) Stop spinning the left outboard wheel speed transducer.
52) Verify after a 2 ± 1 second delay, the left thrust reverser begins to stow.
53) Verify the left thrust reverser fully stows.
54) Set the left thrust reverser lever to STOW.
55) Set the left squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.

56) Set the Left and Right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
57) Move the right thrust reverser lever to DEPLOY.
58) Verify that when the right thrust reverser is fully deployed that the right T/R DEPLOY annunciator illuminates and the right T/R UNLOCK annunciator extinguishes.
59) Spin the left outboard and right outboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

60) Within 40 seconds of setting the squat switches to ground mode set the right squat switch to flight mode and stop the stopwatch while continuing to spin the left outboard and right outboard wheel speed transducers.
61) Verify the right thrust reverser remains deployed.
62) Stop spinning the right outboard wheel speed transducer.
63) Verify the right thrust reverser remains deployed.
64) Stop spinning the left outboard wheel speed transducer.
65) Verify after a 2 ± 1 second delay, the right thrust reverser begins to stow.
66) Verify the right thrust reverser is fully stowed.
67) Set the right thrust reverser lever to STOW.
68) Set the right squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.
69) Set the left and right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
70) Set the right thrust reverser lever to DEPLOY.
71) Verify that when the right thrust reverser is fully deployed that the right T/R DEPLOY annunciator illuminates and the right T/R UNLOCK annunciator extinguishes.
72) Spin the left inboard and right inboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

73) Within 40 seconds of setting the squat switches to ground mode, set the left squat switch to flight mode and stop the stopwatch while continuing to spin the left inboard and right inboard wheel speed transducers.
74) Verify the right thrust reverser remains deployed.
75) Stop spinning the left inboard wheel speed transducer.
76) Verify the right thrust reverser remains deployed.
77) Stop spinning the right inboard wheel speed transducer.
78) Verify after a 2 ± 1 second delay, the right thrust reverser begins to stow.
79) Verify the right thrust reverser is fully stowed.
80) Set the right thrust reverser lever to STOW.
81) Set the right squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.

82) Set the left and right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
83) Set the left thrust reverser lever to DEPLOY.
84) Verify that when the left thrust reverser is fully deployed, that the left T/R DEPLOY annunciator illuminates and the left T/R UNLOCK annunciator extinguishes.
85) Spin the left inboard and right inboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

86) Within 40 seconds of setting the squat switches to ground mode, set the left squat switch to flight mode and stop the stopwatch while continuing to spin the left inboard and right inboard wheel speed transducers.
87) Verify the left thrust reverser remains deployed.
88) Stop spinning the left inboard wheel speed transducer.
89) Verify the left thrust reverser remains deployed.
90) Stop spinning the right inboard wheel speed transducer.
91) Verify after a 2 ± 1 second delay, the left thrust reverser begins to stow.
92) Verify the left thrust reverser is fully stowed.
93) Set the left thrust reverser lever to STOW.
94) Set the left squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.
95) Set the left and right squat switches to ground mode.
    a) Start the stopwatch when the switches are set.
    b) Set both squat switches to ground mode as close to the same time as possible.
96) Set the right thrust reverser lever to DEPLOY.
97) Verify that when the right thrust reverser is fully deployed that the right T/R DEPLOY annunciator illuminates and the right T/R UNLOCK annunciator extinguishes.
98) Spin the left inboard and right inboard wheel speed transducers to fast drill speed.

    NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

99) Within 40 seconds of setting the squat switches to ground mode set the left squat switch to flight mode and stop the stopwatch while continuing to spin the left inboard and right inboard wheel speed transducers.
100) Verify the right thrust reverser remains deployed.
101) Stop spinning the right inboard wheel speed transducer.
102) Verify the right thrust reverser remains deployed.
103) Stop spinning the left inboard wheel speed transducer.
104) Verify after a 2 ± 1 second delay, the right thrust reverser begins to stow.
105) Verify the right thrust reverser is fully stowed.
106) Set the right thrust reverser lever to STOW.
107) Set the left squat switch to flight mode. Maintain flight mode with both squat switches for 3 minutes minimum.

108) Set the left and right squat switches to ground mode.
   a) Start the stopwatch when the switches are set.
   b) Set both squat switches to ground mode as close to the same time as possible.
109) Set the left thrust reverser lever to DEPLOY.
110) Verify that when the left thrust reverser is fully deployed that the left T/R DEPLOY annunciator illuminates and the left T/R UNLOCK annunciator extinguishes.
111) Spin the left inboard and right inboard wheel speed transducers to fast drill speed.

NOTE: Fast drill speed range is from 1100 RPM to 2000 RPM.

112) Within 40 seconds of setting the squat switches to ground mode set the left squat switch to flight mode and stop the stopwatch while continuing to spin the left inboard and right inboard wheel speed transducers.
113) Verify the left thrust reverser remains deployed.
114) Stop spinning the right inboard wheel speed transducer.
115) Verify the left thrust reverser remains deployed.
116) Stop spinning the left inboard wheel speed transducer.
117) Verify after a 2 ± 1 second delay, the left thrust reverser begins to stow.
118) Verify the left thrust reverser is fully stowed.
119) Set the left thrust reverser lever to STOW.

(2) Functional Test of the Spoiler System

(a) Perform the following test to check thrust reverser interface box operations with the spoiler system.

1) Verify the aircraft is on jacks with the nose and main gear clearing the ground in the DOWN position. (Refer to Learjet Maintenance Manual, Chapter 7.)
2) Install the spoiler cages over the spoilers.
3) Connect an external electrical power source to the aircraft. (Refer to Learjet Maintenance Manual, Chapter 24.)
4) Connect external hydraulic power source to aircraft. (Refer to Learjet Maintenance Manual, Chapter 24.)
5) Set the battery switches on.
6) Set the inverter switches on.
7) Pressurize hydraulic system to 1,500 (± 50) psi [10,342 (±345) kPa].
8) Ensure both squat switches are in flight mode.
9) Extend flaps to 20 degrees and set both throttles above IDLE.
10) Set squat switches to ground mode and start stopwatch when squat switches are set. Set both squat switches to ground mode as close to the same time as possible.
11) Within 45 seconds after performing step 2.C.(2)(a)10), set both throttles to IDLE and set spoiler lever to ARM.
12) Verify that Spoilers extend, SPOILER ARM and SPOILER EXT annunciators shall illuminate.
13) Wait for 20 seconds after the completion of step 2.C.(2)(a)10).
14) Set both throttles above IDLE for 5 seconds and return throttles to IDLE.
15) Spoilers shall retract, SPOILER ARM annunciator shall remain illuminated, and SPOILER EXT annunciator shall extinguish.

16) Using drill motors, spin LH inboard and RH outboard wheels to fast drill speed.

NOTE: Fast drill speed is between 1100 to 2000 rpm. If identical drill motors are not available, regulate the fast motor to match the slower motor using a strobe light.

17) Spoilers shall extend, SPOILER ARM annunciator shall remain illuminated, SPOILER EXT annunciator shall illuminate, and SPOILER MON annunciator shall be extinguished.
18) Reduce wheel speed to zero (0).
19) Advance both throttles above IDLE.
20) Spoilers shall retract.
21) Return both throttles to IDLE.
22) SPOILER ARM annunciator shall remain illuminated, SPOILER EXT annunciator shall extinguish, and SPOILER MON annunciator shall be extinguished.
23) Repeat steps 2.C.(2)(a)16) thru 22), except spin the LH outboard and RH inboard wheels to fast drill speed.
24) Set squat switches to flight mode.

NOTE: Perform steps 2.C.(2)(a)24) thru 30) within 1.5 minutes of setting squat switches to flight mode.

25) Spin left outboard and right inboard wheels to fast drill speed.
26) Verify that spoilers are retracted, SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
27) Push the spoileron Reset/Test Switch.
28) Verify that spoilers do not extend upon release of switch.
29) Verify SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
30) Reduce wheel speed to zero (0).
31) Wait 2 minutes, 15 seconds after starting step 2.C.(2)(a)24).
32) Spin the outboard wheels to fast drill speed.

NOTE: Fast drill speed is between 1100 to 2000 rpm. If identical drill motors are not available, regulate the fast motor to match the slower motor using a strobe light.

33) Verify that spoilers are not extended, SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
34) Reduce wheel speed to zero (0).
35) Advance both throttles above IDLE and return to IDLE.
36) Spin inboard wheels to fast drill speed.
37) Verify that spoilers are not extended, SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
38) Reduce wheel speed to zero (0).
39) Advance both throttles above IDLE and return to IDLE.

40) Spin the left inboard and outboard wheels to fast drill speed.
41) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators illuminate, and SPOILER MON annunciator is extinguished.
42) Reduce wheel speed to zero (0).
43) Advance both throttles above IDLE and verify that spoilers retract.
44) Return throttles to IDLE.
45) Verify SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
46) Spin right inboard and outboard wheels to fast drill speed.
47) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators are illuminated, and SPOILER MON annunciator is extinguished.
48) Reduce wheel speed to zero (0).
49) Advance both throttles above IDLE and verify that spoilers retract.
50) Return throttles to IDLE.
51) Verify that SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
52) Spin the right inboard and left outboard wheels to fast drill speed.
53) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators are illuminated, and SPOILER MON annunciator is extinguished.
54) Reduce wheel speed to zero (0).
55) Advance both throttles above IDLE and verify that spoilers retract.
56) Return throttles to IDLE.
57) Verify that SPOILER ARM annunciator is illuminated and the SPOILER EXT and SPOILER MON annunciators are extinguished.
58) Set right squat switch to ground mode.
59) Within 45 seconds, spin left inboard wheel to fast drill speed.
60) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators are illuminated, and SPOILER MON annunciator is extinguished.
61) Reduce wheel speed to zero (0).
62) Standby for 56 seconds after performing step 2.C.(2)(a)58), advance both throttles above IDLE and verify that spoilers retract.
63) Return throttles to IDLE.
64) Verify SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
65) Standby for one minute after step 2.C.(2)(a)58), spin the left outboard wheel to fast drill speed.
66) Verify spoilers do not extend, SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
67) Reduce wheel speed to zero (0).
68) Advance both throttles above IDLE and return throttles to IDLE.
69) Spin left inboard wheel to fast drill speed.
70) Verify spoilers do not extend, SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
71) Reduce wheel speed to zero (0).
72) Advance both throttles above IDLE and return throttles to IDLE.

73) Spin both left inboard and left outboard wheels to fast drill speed.
74) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators are illuminated, and SPOILER MON annunciator is extinguished.
75) Reduce wheel speed to zero.
76) Complete the following steps within 45 seconds.
    a) Set left squat switch to ground mode.
    b) Set right squat switch to flight mode.
    c) Advance both throttles above IDLE.
    d) Verify spoilers retract.
    e) Return both throttles to IDLE.
    f) Verify the SPOILER ARM is illuminated.
    g) Verify the SPOILER EXT is extinguished.
    h) Verify the SPOILER MON is extinguished.
    i) Spin both right inboard and right outboard wheels to fast drill speed.
    j) Verify spoilers remain retracted.
    k) Verify the SPOILER ARM is illuminated.
    l) Verify the SPOILER EXT is extinguished.
    m) Verify the SPOILER MON is extinguished.
77) Reduce wheel speed to zero.
78) Standby 2 minutes, fifteen seconds after step 2.C.(2)(a)76).
79) Advance both throttles above IDLE and then back to IDLE.
80) Spin both the left inboard and left outboard wheels to fast drill speed.
81) Verify that spoilers extend.
82) Verify that the SPOILER ARM and SPOILER EXT annunciators are illuminated.
83) Verify that the SPOILER MON annunciator is extinguished.
84) Reduce wheel speed to zero (0).
85) Set right squat switch to ground mode.
86) Within 45 seconds of setting the right squat switch to ground mode, advance throttles above IDLE.
87) Verify spoilers retract.
88) Set both throttles to IDLE.
89) Verify that the SPOILER ARM annunciator is illuminated, and SPOILER EXT and SPOILER MON annunciators are extinguished.
90) Set spoiler lever to RET.
91) Verify that the SPOILER ARM, SPOILER EXT and SPOILER MON annunciators are extinguished.

(3) Functional Test of the Asymmetric Squat Switch Monitor
    (a) Perform the following test to check the asymmetric squat switch monitor system operation.
        1) Set the right squat switch to flight mode.
        2) Advance both throttles above IDLE and return to IDLE.
        3) Wait 3 minutes and set spoiler lever to ARM.
        4) Verify the SPOILER ARM annunciator is extinguished.
        5) Set the right squat switch to ground mode.
        6) Verify that spoilers extend, and the SPOILER ARM annunciator is illuminated.
        7) Wait 18 seconds, set both throttles above IDLE, and verify spoilers retract.

8) Return both throttles to IDLE.
9) Set the spoiler lever to RETRACT, and verify the SPOILER ARM annunciator is extinguished.
10) Set the left squat switch to flight mode.
11) Advance both throttles above IDLE and return to IDLE.
12) Wait 3 minutes and set spoiler lever to ARM.
13) Verify the SPOILER ARM annunciator is extinguished.
14) Set the left squat switch to ground mode.
15) Verify that spoilers extend, and the SPOILER ARM annunciator is illuminated.
16) Wait 18 seconds, set both throttles above IDLE, and verify spoilers retract.
17) Return both throttles to IDLE.
18) Set the spoiler lever to RETRACT.

(4) Functional Test of the Wheel Speed Mode Engagement

(a) Perform the following test to check the wheel speed mode engagement.

1) Set the spoiler lever to ARM.
2) Verify that spoilers extend, and the SPOILER ARM annunciator is illuminated.
3) Advance both throttles above IDLE and verify spoilers retract.
4) Return both throttles to IDLE.
5) Set spoiler lever to RETRACT, and verify the SPOILER ARM annunciator is extinguished.
6) Set the spoiler lever to ARM.
7) Verify that spoilers extend, and the SPOILER ARM annunciator is illuminated.
8) Set the spoiler lever to RETRACT.
9) Verify spoilers retract and SPOILER ARM annunciator is extinguished.

(5) Functional Test of the Spoiler Reset System

(a) Perform the following test to check the spoiler system in the SPOILER RESET position.

1) Set both throttles to IDLE.
2) Set spoiler lever to ARM and verify the spoilers extend within 2 seconds.
3) Verify the SPOILER ARM and SPOILER EXT annunciators are illuminated.
4) Rotate the SYSTEM TEST switch to SPOILER RESET, and depress and hold the TEST switch.
5) Verify the spoilers retract within 1 second.
6) Verify the SPOILER MON annunciator is illuminated, and the SPOILER ARM and SPOILER EXT annunciators are extinguished.
7) Release the TEST switch.
8) Verify that spoilers extend, SPOILER ARM and SPOILER EXT annunciators are illuminated, and SPOILER MON annunciator is extinguished.
9) Depress and release the TEST switch.

NOTE: Upon depressing the TEST switch, the spoilers will retract.

10) Verify the spoilers are extended and the SPOILER EXT annunciator is illuminated.
11) Set the left throttle above IDLE.
12) Verify the spoilers retract, the SPOILER ARM annunciator is illuminated, and the SPOILER EXT annunciator is extinguished.
13) Return the left throttle to IDLE and verify the spoilers remain retracted.

14) Repeat steps 2.C.(5)(a) 9) thru 13) for the right throttle.
15) Set the right throttle to the MCR detent.
16) Extend the spoilers, and verify the takeoff aural warning horn sounds.
17) Retract the spoilers.
18) Depressurize the hydraulic system. (Refer to Learjet Maintenance Manual, Chapter 29.)
19) Remove the aircraft from jacks (Refer to Learjet Maintenance Manual, Chapter 7.)
20) Disconnect external hydraulic power source from aircraft. (Refer to Learjet Maintenance Manual, Chapter 29.)
21) Check hydraulic reservoir fluid levels. (Refer to Learjet Maintenance Manual, Chapter 12.)
22) Set inverter switches off.
23) Set battery switches off.
24) Disconnect external electrical power.
25) Remove spoiler cages.

D. Restore Aircraft to Airworthy Status
(1) Install left side liner panel assembly to aircraft.
(2) Install floor liner panel to aircraft.
(3) Close aft cabin baggage compartment closet door.

E. Complete the attached Compliance Response Form and return as soon as possible.

F. Complete aircraft maintenance records in accordance with FAR 43.9.

3. Material Information

A. Parts Required

NOTE: The 6081046-801 Kit contains the following parts.

PART NUMBER	QTY	NOMENCLATURE	NOTES
D-436-36	2	Splice	
D-142-51	3	Solder Sleeve	
MS27039-0806	4	Screw	
MS21075L08N	4	Nutplate	
M85049/38-S13N	1	Backshell (P1131)	
MS20470AD4-3	12	Rivet	
MS20426AD3-2	8	Rivet	
M39029/58-363	4	Pin	Used on J5.
M39029/56-351	14	Socket	Used on P5 and P1131.
M39029/32-259	4	Socket	Used on P718 and P719.
D38999/26KC98SN	1	Plug (P1131)	

PART NUMBER	QTY	NOMENCLATURE	NOTES
6018004-804	1	Bracket	
6018004-803	1	Bracket	
6081046-803	1	Wire Kit	

NOTE: The actual quantity for hardware contained in the kit may be greater than the quantity shown in the parts list as hardware may be supplied in pre-packaged quantities.

(1) The 6081046-803 wire kit contains the following parts.

PART NUMBER OR WIRE CODE	QTY	NOMENCLATURE OR WIRE SPECIFICATION	NOTES
C249A22N	5 FT.	M22759/34-22-9	
C250A22N	5 FT.	M22759/34-22-9	
K304A22	10 FT.	M22759/34-22-9	
K305A22	10 FT.	M22759/34-22-9	
K306A22	10 FT.	M22759/34-22-9	
K307A22	10 FT.	M22759/34-22-9	
K304B22	25 FT.	M22759/34-22-9	
K305B22	25 FT.	M22759/34-22-9	
K306B22	25 FT.	M22759/34-22-9	
K307B22	25 FT.	M22759/34-22-9	
C98B22	10 FT.	M27500-22SD-2T23	

NOTE: The actual quantity for hardware contained in the kit may be greater than the quantity shown in the parts list as hardware may be supplied in pre-packaged quantities.

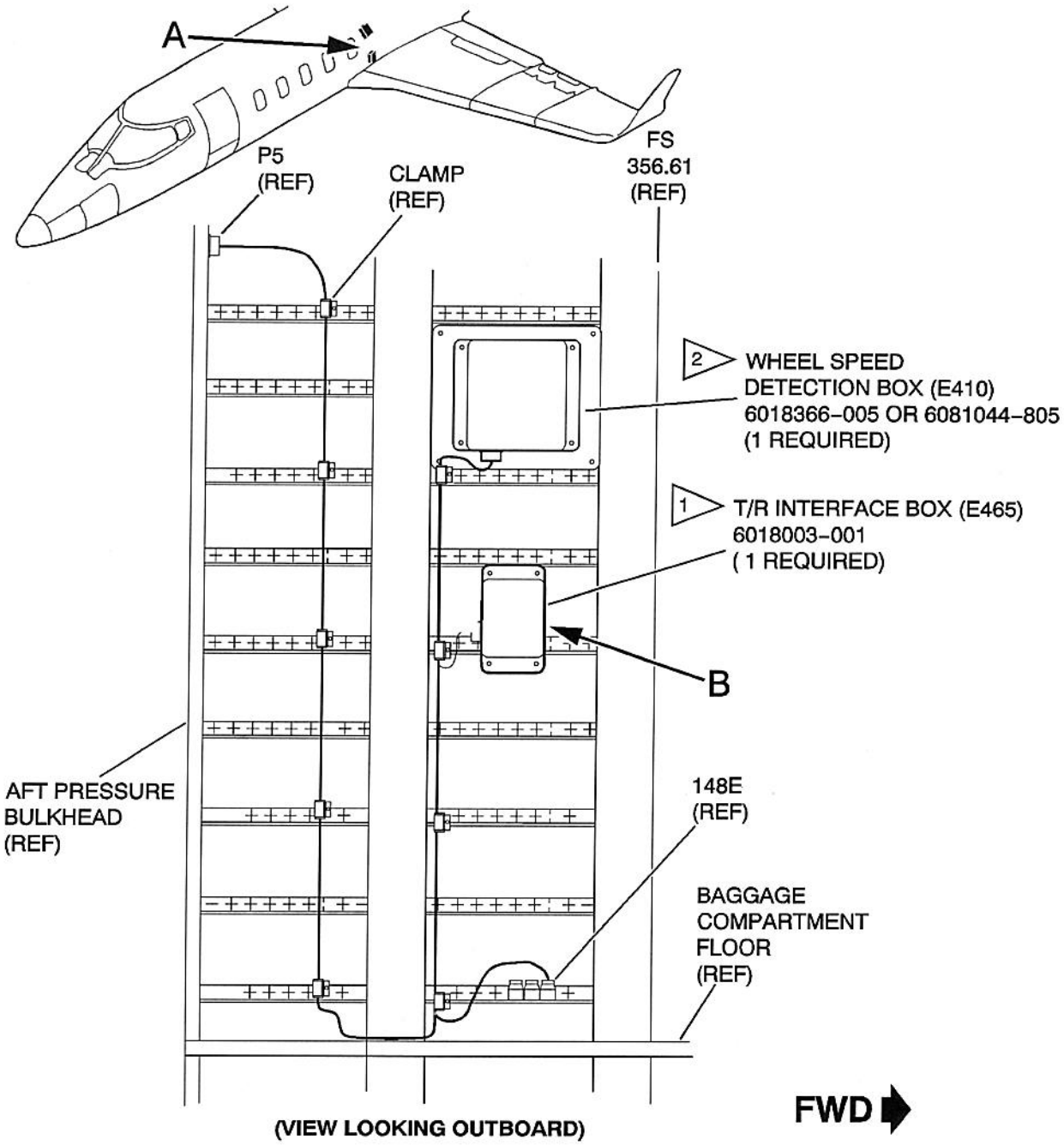
B. Parts Removed List

PART NUMBER	QTY	NOMENCLATURE	DISPOSITION	EFFECTIVITY	REPLACED BY
6018367V1-001 or 6018367V2-001 or 6018366-004 or 6081044-801	1	Wheel Speed Detect Box (E410)	Return to Learjet	60-002 thru 60-276	6018366-005 or 6081044-805

(1) Parts Identified in the "Parts Removed List" with a return to Learjet disposition must be returned within 20 days to avoid late penalty fees. Contact Bombardier Aerospace Parts Logistics Business Aircraft Customer Service at 1-888-222-1428 to obtain a Material Return Authorization.

(2) Parts identified in the "Parts Removed List" with a return to Learjet disposition, may be shipped to the following address:

RETURN SHIPPING ADDRESS
Bombardier Aerospace 251-A Wille Road Des Plaines, IL 60018 USA



(VIEW LOOKING OUTBOARD)

Detail A

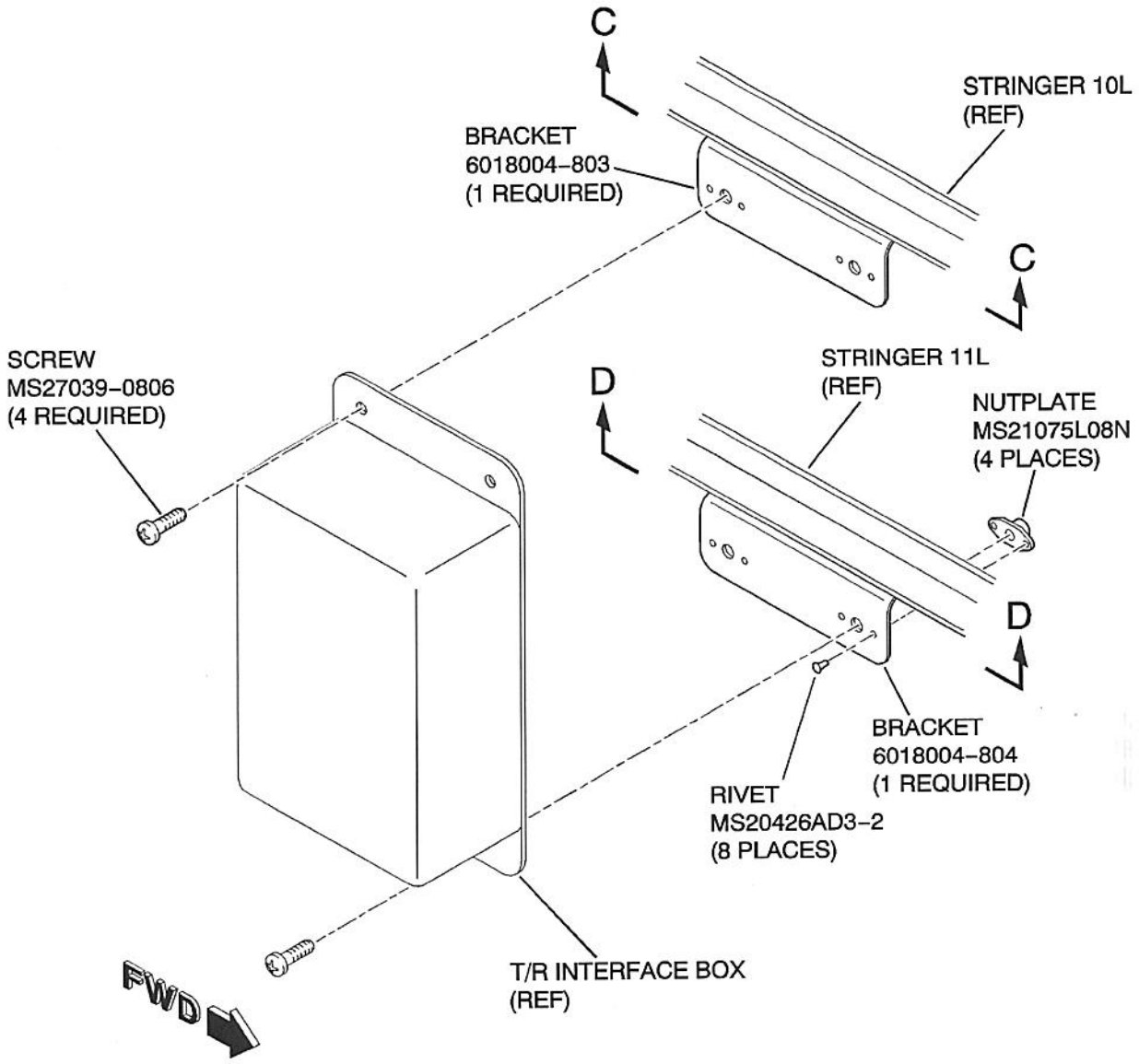
NOTES

1. Electrically bond per Learjet Model 60 wiring manual.

2. If correct part number wheel speed detect box (E410) is installed, it is not required to remove and replace unit.

K60-607807-001-01

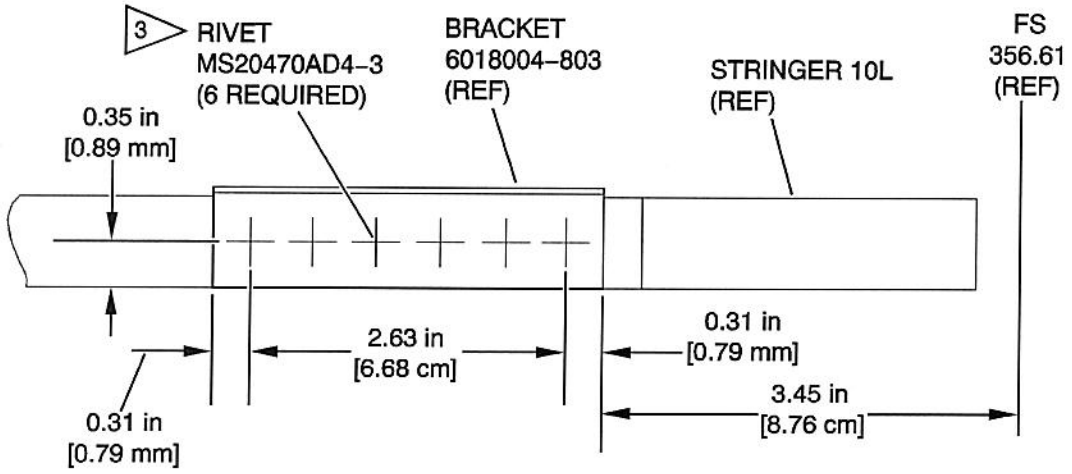
Wiring Modification of Circuit Breaker Panel Connectors
Figure 1 (Sheet 1 of 3)



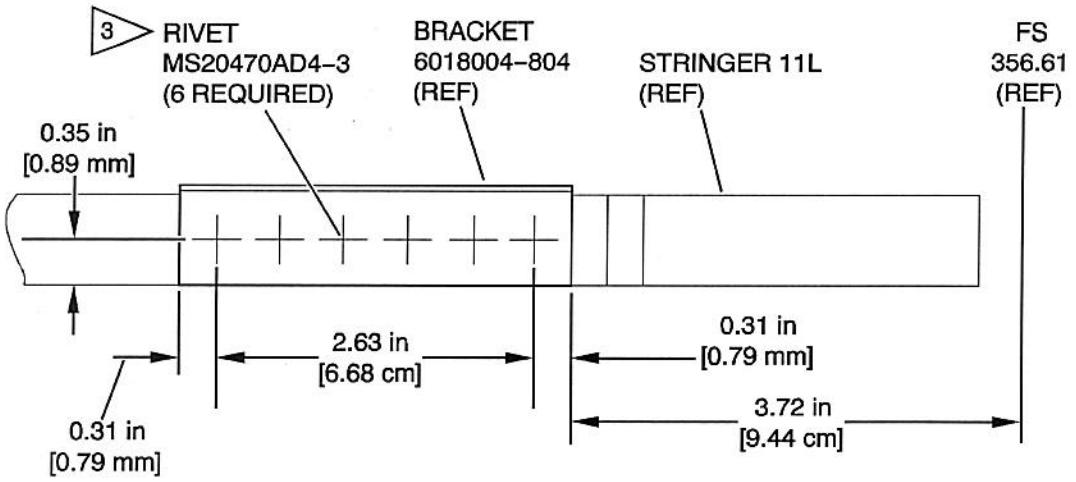
Detail B

K60–607807–001–02

Wiring Modification of Circuit Breaker Panel Connectors
Figure 1 (Sheet 2 of 3)



View C–C **FWD**



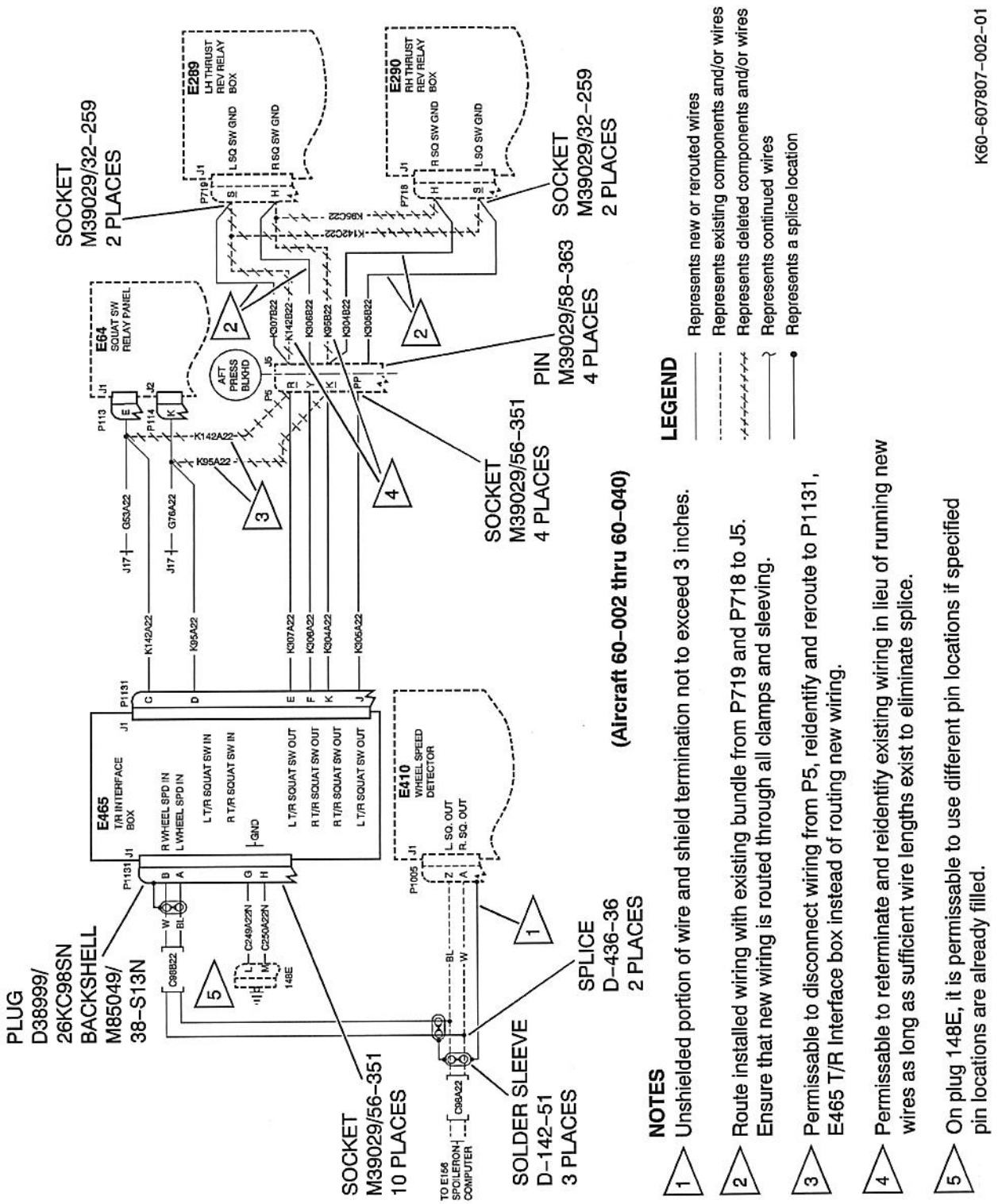
View D–D **FWD**

NOTE

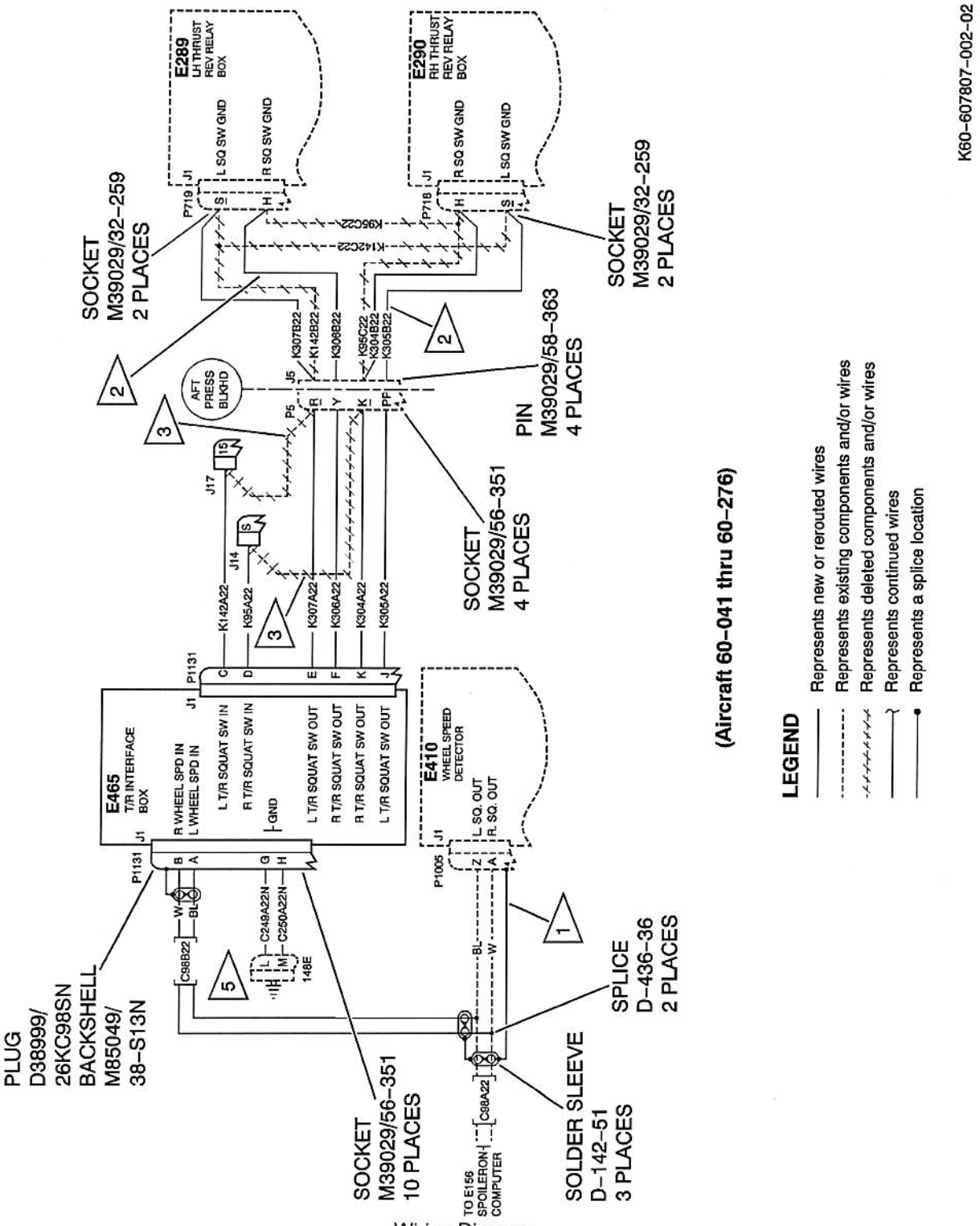
3 Drill holes through bracket and stringer together.

K60-607807-001-03

Wiring Modification of Circuit Breaker Panel Connectors
Figure 1 (Sheet 3 of 3)



Wiring Diagram
Figure 2 (Sheet 1 of 2)



Wiring Diagram
Figure 2 (Sheet 2 of 2)

SERVICE BULLETIN COMPLIANCE RESPONSE

BOMBARDIER

It is necessary that Bombardier Learjet record aircraft having complied with this Service Bulletin. Please fill in the Service Bulletin and aircraft information below, sign and date the form in the space provided, fold on dotted lines, seal with tape, and mail completed form to Bombardier Learjet Maintenance Engineering. If mailed within the United States, this form may be mailed to Bombardier Learjet Maintenance Engineering using business reply mail (see reverse). This form may be faxed or e-mailed if preferred. (See mailing information provided.)

WARRANTY - Completion of this response form is required in order to process the warranty claim. Therefore, if a warranty allowance is provided in the Service Bulletin, return a copy of this form with the warranty claim.

SMART PARTS - Completion of this response form is required in order to remain, enroll, or re-enroll in the Smart Parts Program.

Mailing Information:

Bombardier Learjet
Maintenance Engineering
(MS #78) (FAX 316 946-2305)
fracas_usa@aero.bombardier.com
Customer Support
Learjet, Inc.

Service Bulletin Information

Service Bulletin No. 60-78-7

Rev No. 2 Date May 1, 2006

Service Facility Information

Facility Incorporating Bulletin _____

Aircraft Information

Model _____

Serial No. _____

Flight Hours _____

Landings _____

Compliance Information

The above referenced Service Bulletin was complied with on the referenced serial number aircraft at the listed aircraft flight hours/landings:

Actual hours to accomplish Service Bulletin: Access _____ SB _____ Test(s) _____ Restore _____

Signature _____ Title _____ Date _____

Comments _____

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SERVICE BULLETIN EVALUATION SHEET

BOMBARDIER

YOUR COMMENTS WILL HELP US IMPROVE OUR SERVICE BULLETINS

SERVICE BULLETIN 60-78-7 **REVISION:** 2 **DATED:** May 1, 2006

TITLE: Installation of Thrust Reverser Interface Box

LEARJET CONTACT INFORMATION **TELEPHONE:** (316) 946-2421 **FACSIMILE:** (316) 946-2002

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
HOW EASY IS THE BULLETIN TO UNDERSTAND? COMMENTS _____	☐	☐	☐	☐	☐
DOES THE BULLETIN TELL YOU ALL YOU NEED TO KNOW ABOUT THE JOB? COMMENTS _____	☐	☐	☐	☐	☐
DO YOU THINK THE BULLETIN CONVEYS THE BEST WAY TO DO THE JOB? COMMENTS _____	☐	☐	☐	☐	☐
HOW REALISTIC ARE THE LABOR-HOUR ESTIMATES? COMMENTS _____	☐	☐	☐	☐	☐
WHAT IS YOUR APPRECIATION OF THE ILLUSTRATION (S), FIGURE (S) AND/OR KIT DRAWING (S)? COMMENTS _____	☐	☐	☐	☐	☐

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PLEASE SUPPLY THE FOLLOWING DATA:

NAME: _____

OPERATOR: _____ **TELEPHONE:** _____

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