

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.



P.O. BOX 7707
 WICHITA, KANSAS 67277-7707
 (316) 946-2000

Model: 35/36

Bulletin No. SB 35/36-30-10

Date: June 28, 1998
 Revision 1 February 12, 1999

ICE AND RAIN PROTECTION - Replacement of Wing Anti-Ice Transverse Duct

1. Planning Information

A. Effectivity

- (1) Learjet 35-002 thru 35-676.
- (2) Learjet 36-001 thru 36-063.

B. Reason

- (1) In the wing anti-ice system a transverse duct in the aft cabin area routes bleed air from the supply duct on the left side of the fuselage to the diffuser tube in the right wing. After many heating and cooling cycles the aluminum material gradually softens allowing cabin pressure to push the flat sides of the duct together restricting bleed air flow to the right wing. A new stainless steel transverse duct will prevent distortion of the duct.

C. Description

- (1) Instructions are provided herein to replace the wing anti-ice transverse duct.

D. Compliance

- (1) It is recommended that this bulletin be complied with not later than the next 600 flight hours after receipt.

E. Approval

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

F. Labor Hours - Estimated Accomplishment Time

- (1) 4 labor hours (1 mechanic) to gain access to affected area.
- (2) 4 labor hours (1 mechanic) to comply with service bulletin.
- (3) 2 labor hours (2 mechanics) to perform functional test and leak check.
- (4) 5 labor hours (1 mechanic) to restore aircraft to airworthiness status.

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

G. Material Cost and Availability

- (1) Parts needed to accomplish this Service Bulletin should be ordered through Learjet Spare Parts Sales or an Authorized Service Facility. No Service Bulletin kit is available.
- (2) Warranty - N/A

SERVICE BULLETIN

H. Tooling
None

I. Weight and Balance
None

J. References
(1) Learjet Illustrated Parts Catalog, Chapter 30.

K. Other Publications Affected
(1) Learjet Maintenance Manual, Chapter 5.

2. Accomplishment Instructions

A. Replace anti-ice transverse duct as follows:

- (1) Disconnect aircraft batteries.
- (2) Remove aft divan seat cushions. (See Detail B.)
- (3) Remove upholstery as necessary to access diffuser assembly (8). (See Detail C.)

NOTE: On Aircraft 35-002 thru 35-055 and 36-001 thru 36-063 diffuser assembly (10) is a shroud. Duct (8) will not exist. Installation for all aircraft is similar.

- (4) Disconnect duct (6). (See Detail C.)
- (5) Remove screws or rivets (9) and rivets (7) from diffuser assembly (8). Remove diffuser assembly from aircraft. (See Detail C.)

WARNING: USE EXTREME CAUTION WHEN REMOVING EXISTING GASKET (5) AND INSULATOR (23). THESE PARTS CONTAIN ASBESTOS MATERIAL AND PRESENT A HEALTH HAZARD. PROLONGED EXPOSURE TO ASBESTOS MATERIAL CAN CAUSE SERIOUS PHYSICAL INJURY OR DEATH. USE APPROPRIATE MATERIAL HANDLING EQUIPMENT TO GUARD AGAINST INHALATION OF AIRBORNE PARTICLES AS WELL AS PARTICLES IMPREGNATING CLOTHING AND SKIN.

- (6) Disconnect coupling (3) and remove bolts (4) from transverse duct assembly (2). Discard transverse duct (2), seals (3) and gasket (5). (See Detail C.)
- (7) Remove coupling (10) from left wing exit duct. (See Detail D.)
- (8) Gain external access under cuff fairing area to left fuselage exit duct. (See Detail D.)
- (9) Remove fillet tube assembly (11) and fitting (12) from left fuselage exit duct. (See Detail D.)
- (10) Loosen clamp (13) and remove. Loosen sleeve (14) from left fuselage exit duct assembly (16). (See Detail D.)
- (11) Remove screws (15) and nuts (18) from left fuselage exit duct assembly. (See Detail D.)
- (12) Remove left fuselage exit duct assembly from aircraft. (See Detail D.)
- (13) Remove all sealant and insulator (19) and clean mating surface between left fuselage exit duct assembly flange (17) and fuselage skin.
- (14) Apply a bead of sealant to new transverse duct assembly (2) flange and exit duct assembly (14) flange. (Refer to Learjet Maintenance Manual, Chapter 20, Sealants, Description and Operation.)

SERVICE BULLETIN SERVICE BULLETIN

- (15) Mate new transverse duct assembly (2) with new gasket (5) and bolts (4) to left fuselage exit duct assembly (14). Snug bolts (4) but do not final torque.
- (16) Apply sealant to left fuselage exit duct assembly mating flange (17) and to mating surface of fuselage. (See Detail D.) (Refer to Learjet Maintenance Manual, Chapter 20, Sealants, Description and Operation.)
- (17) Install insulator (19) on exit duct assembly (14).
- (18) Position transverse duct (2) and left fuselage exit duct assembly (16) in aircraft.
- (19) Install coupling and seals (3). (See Detail C.) Do not tighten.
- (20) Install coupling and seals (10). (See Detail D.) Do not tighten.
- (21) Install screws (15) through left fuselage exit duct assembly mating flange (17) and fuselage skin. Install nuts (18). Do not final torque. (See Detail D.)
- (22) Sequentially tighten coupling (10), coupling (3), and screws (15). If necessary, loosen bolts (4) slightly to achieve proper alignment. (See Detail C and Detail D.)

CAUTION: ENSURE THAT WING EXIT DUCT FLANGE MATES ADEQUATELY WITH FUSELAGE SKIN. IF SEAL IS INADEQUATE, A PRESSURIZATION LEAK WILL OCCUR.

- (23) Install fillet tube assembly (11), fitting (12) and sleeve (14) on left fuselage exit duct assembly (16). Tighten clamp (13). (See Detail D.)
- (24) Perform Cabin Leakage Check. (Refer to Learjet Maintenance Manual, Chapter 21, AIR CONDITIONING, Pressurization Control, Maintenance Practices.) Check for external leaks between left fuselage exit duct assembly (16) and fuselage skin.
- (25) Perform Functional Test of Wing Temperature Sensing and Indicating System and leak check transverse duct (2) and coupling (10). (Refer to Learjet Maintenance Manual, Chapter 30, ICE AND RAIN PROTECTION.)

CAUTION: IF LEAKAGE FROM THE TRANSVERSE DUCT INSTALLATION OCCURS, HIGH TEMPERATURE BLEED AIR WILL ESCAPE INTO CABIN AREA.

- (26) Install diffuser assembly (8) with rivets (7) and existing screws or new rivets (9).
- (27) Connect duct (6).
- (28) Close cuff fairing area which was opened for access in step 9. Apply sealant to gaps. Touch up paint.
- (29) Close area which was opened for access in step 8.
- (30) Install upholstery and divan seat cushions.
- (31) Connect and safety aircraft battery connectors.

B. Complete the attached Compliance Response Form.

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

SERVICE BULLETIN SERVICE BULLETIN

3. Material Information

A. Parts Required:

NOTE: The following parts are necessary to accomplish this bulletin and may be purchased through your Learjet Authorized Service Facility:

<u>Part Number</u>	<u>Quantity</u>	<u>Nomenclature</u>	<u>Effectivity</u>	<u>Old Part Number</u>	<u>Disposition</u>
NAS1738B-4-1*	21	Rivet	1		
NAS1738B-4-3*	8	Rivet	2		
W932-20B	2	Seal	3		
W932-24B	2	Seal	All		
2619032-801	1	Insulator	All		
2619033-018	1	Transverse Duct (stainless steel)	3	2619033-15	Discard
2619033-801	1	Transverse Duct (stainless steel)	4	2619033-11	Discard
2619036-1	1	Gasket	All		

1 Six additional rivets are required for Model 36.

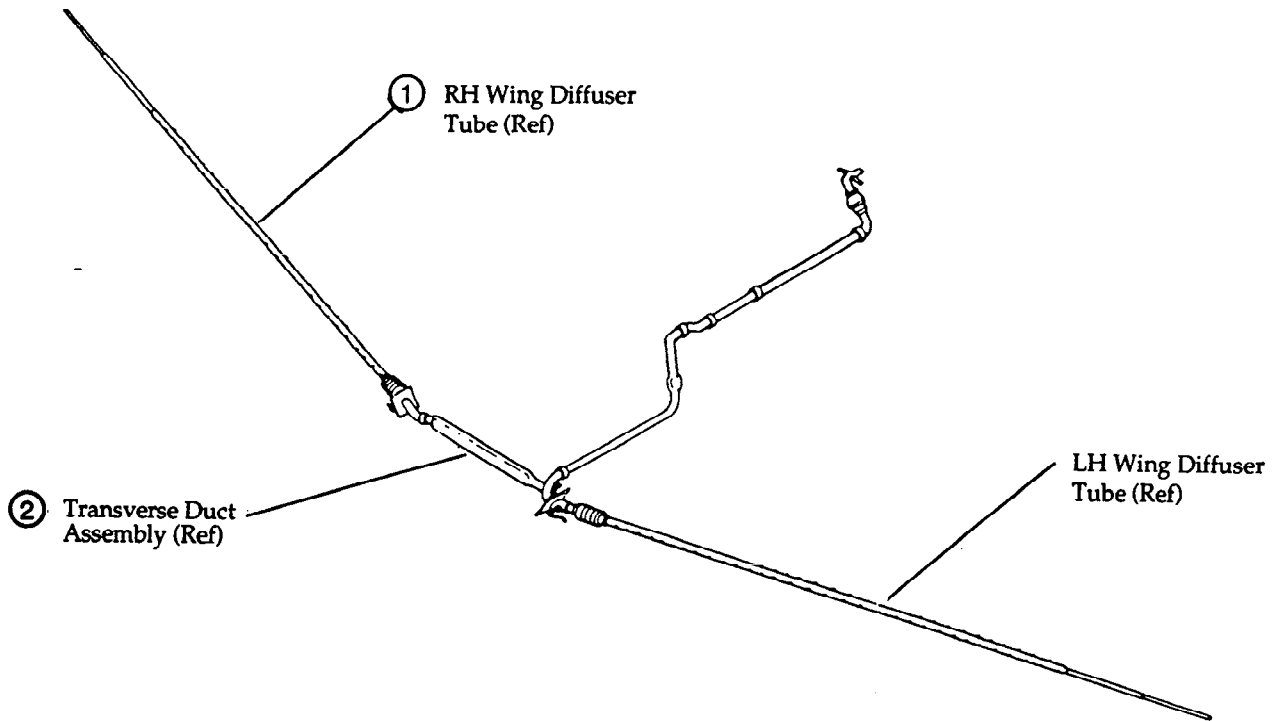
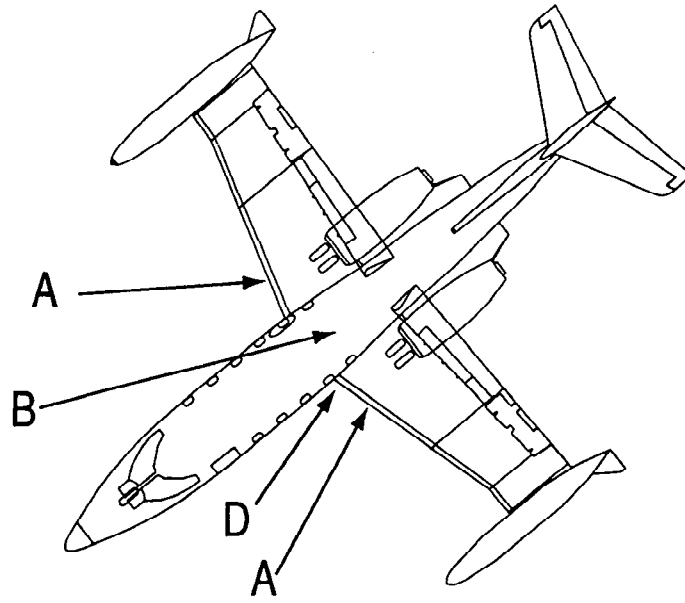
2 35-002 thru 35-055.

3 35-619 thru 35-676, 36-056 thru 36-063.

4 35-002 thru 35-618, 36-001 thru 36-055.

* CR2249 & CR3243 are alternates.

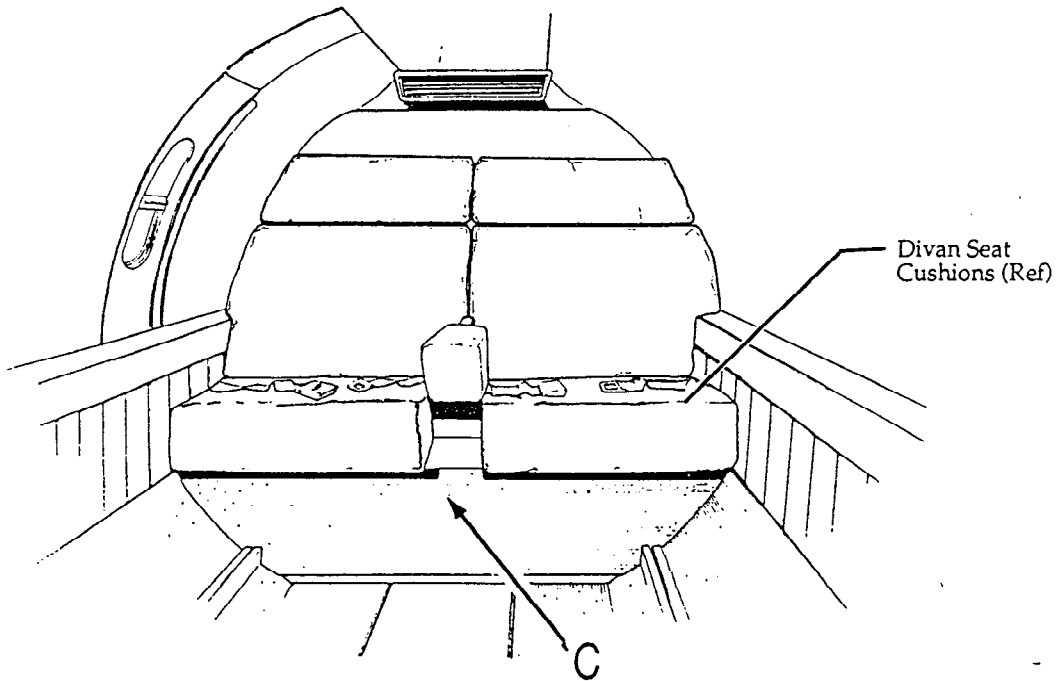
SERVICE BULLETIN



Detail A

Figure 1. Replacement of Wing Anti-Ice Transverse Duct (Sheet 1 of 3)

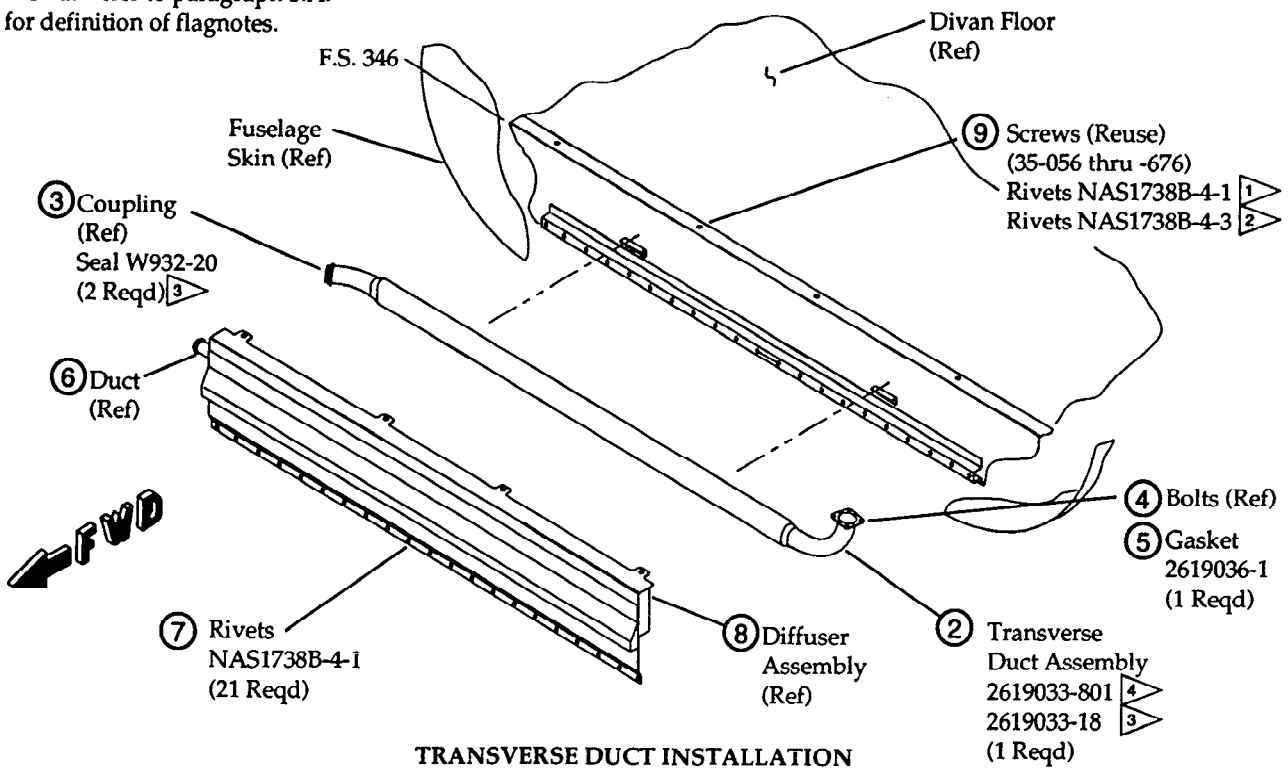
SERVICE BULLETIN



(VIEW LOOKING AFT IN CABIN AT DIVAN SEAT)

Detail B

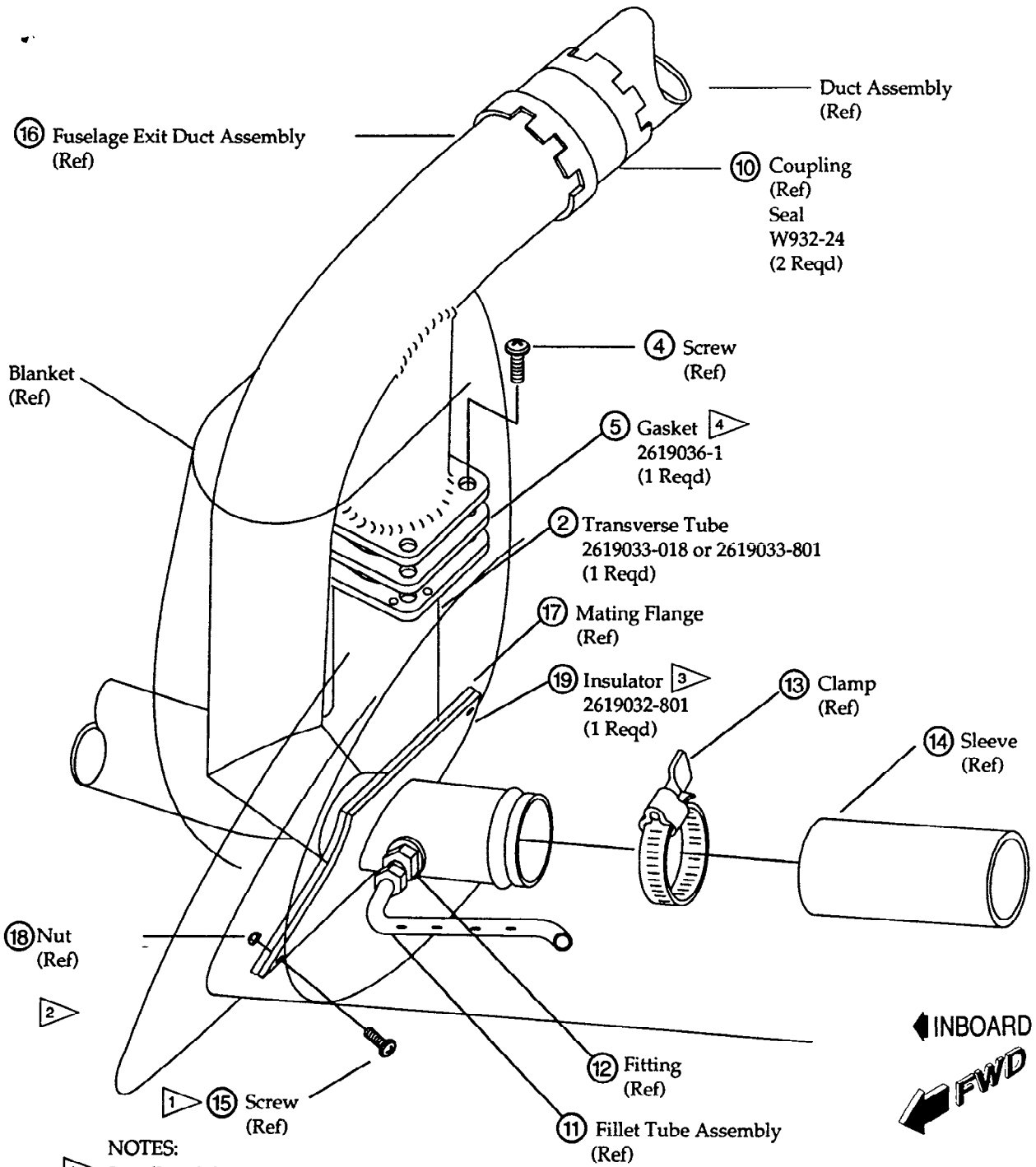
NOTE: Refer to paragraph 3.A. for definition of flagnotes.



Detail C

Figure 1. Replacement of Wing Anti-Ice Transverse Duct (Sheet 2 of 3)

SERVICE BULLETIN



- NOTES:
- 1 Install with head outward.
 - 2 Apply sealant to nuts after installation.
 - 3 Trim insulator to fit flange as necessary.
 - 4 It is recommended to apply high temp RTV, Class IV per Maintenance Manual, Chapter 20.

(LEFT WING EXIT DUCT INSTALLATION)

Detail D

Figure 1. Replacement of Wing Anti-Ice Transverse Duct (Sheet 3 of 3)