

FALCON SERVICE BULLETIN

FALCON 900EX FALCON 900EX EASy FALCON 900DX

No 285-R1

JANUARY 26, 2015

MANDATORY

ATA 33-08

**LIGHTING
EXTERIOR LIGHTING
ELECTRICAL BONDING OF WHELEN FIN TIP ANTI-
COLLISION LIGHT**

Copyright © 2015 by Dassault Aviation
All rights reserved. No part of this work may be reproduced or copied
in any form or by any means without written permission
of Dassault Aviation.

FALCON 900EX**F900EX -285**

**LIGHTING
EXTERIOR LIGHTING
ELECTRICAL BONDING OF WHELEN FIN TIP ANTI-COLLISION LIGHT**

Initial issuance

July 18, 2007

List of effective pages :
1 to 15

Erratum

September 09, 2007

List of effective pages :
1 to 15
List of modified pages :
8

Revision 1

January 26, 2015

List of effective pages :
1 to 14
List of modified pages :
1 to 11

REASON: The Service Bulletin is now rendered mandatory.

This revision is not applicable to aircraft already modified per the initial issuance of this Service Bulletin.

FALCON 900EX**F900EX -285**

LIGHTING
EXTERIOR LIGHTING
ELECTRICAL BONDING OF WHELEN FIN TIP ANTI-COLLISION LIGHT

1. PLANNING INFORMATION**A. EFFECTIVITY**

This Service Bulletin is applicable to the following aircraft equipped with a WHELEN fin tip anti-collision light (without SATCOM fairing):

- FALCON 900EX with serial numbers 1 through 195, equipped with a WHELEN fin tip anti-collision light per Service Bulletin F900EX-25 (M1682), and (F900EX, F900EX-EASy), and
- FALCON 900EX with serial numbers 601 through 620 (F900DX).

B. REASON

The investigation conducted on a FALCON 2000 aircraft that had been struck by lightning has shown that the electrical bonding of the fin tip anti-collision light may not be sufficient under certain circumstances, potentially resulting in damaging the aircraft wiring.

The purpose of this Service Bulletin is to improve the electrical bonding of the FALCON 900EX and FALCON 900DX fin tip anti-collision light whose installation is similar to the F2000.

C. DESCRIPTION

After removing the fin tip fairing, the operation consists of the following:

- to install an electrical bonding strip in two parts between the anti-collision light and a rib of the fin,
- to modify the shield connection of the wiring,
- to modify the routing of the wiring.

D. COMPLIANCE**Mandatory:**

- This Service Bulletin is rendered mandatory by EASA Airworthiness Directive No. 2015-0006.
- As prescribed by the Airworthiness Authorities of the country of registration of the aircraft.

E. APPROVAL

This Service Bulletin covers DASSAULT AVIATION modification F900EX M5381 that has been approved under the authority of DOA nr. EASA.21J.051.

The technical content of this document is approved under the authority of DOA nr. EASA.21J.051.

F. LABOR

Estimated labor-hours: Refer to Service Bulletin Commercial Summary.

NOTE: These labor-hours only concern the work described in this Service Bulletin and do not include other maintenance work that may be performed on this occasion.

FALCON 900EX
F900EX -285
G. MATERIAL - PRICE AND AVAILABILITY

The modification kit may be obtained from either address listed below:

Western hemisphere: DASSAULT FALCON JET CORP.
 SPARES DISTRIBUTION CENTER
 200 RISER ROAD
 LITTLE FERRY, NJ 07643 U.S.A.
 Telephone:
 • CANADA and U.S.A.: 1-800-800-4036
 • MEXICO: 001-800-800-4036
 • Other countries: 1-201-541-4809
 Fax:
 • CANADA and U.S.A.: 1-800-800-4817
 • MEXICO: 001-800-800-4817
 • Other countries: 1-201-440-7021

Other continents: DASSAULT AVIATION
 Falcon Spares
 BOITE POSTALE N°101
 AEROPORT DU BOURGET
 93350 - LE BOURGET Cedex (FRANCE)
 Please contact your Dassault Aviation
 Account Representative
 Telephone: 33 (0)1.48.35.56.78
 Fax: 33 (0)1.48.35.56.00
 E/H dafsorder@dassault-aviation.com

Price and availability on request.

H. TOOLING - PRICE AND AVAILABILITY

Normal maintenance tooling.

I. WEIGHT AND BALANCE

Change in weight: None.

Change in balance with respect to 25% MAC: None.

J. REFERENCES

Aircraft Maintenance Manual:

- GENERAL MAINTENANCE AND SAFETY PRECAUTIONS (Refer to [TASK 20-00-00-910-801](#))
- PRINCIPLES AND CHECK OF THE ELECTRICAL BONDING (Refer to [TASK 20-20-00-910-801](#))
- OPERATIONAL TEST OF THE EXTERIOR LIGHTING (Refer to [TASK 33-40-00-710-801](#))

Illustrated Parts Catalog:

- ANTI-COLLISION LIGHTS (Refer to [IPC fig. 33-40-10-50](#))

FALCON 900EX**F900EX -285**

- VERTICAL STABILIZER FIN TIP (Refer to [IPC fig. 55-30-40-10](#))

Service Bulletin F200EX-25 "Lights - Navigation lights - Replacement of fin anti-collision light"

K. OTHER PUBLICATIONS AFFECTED

The following publications will be revised at a later date to account for the changes introduced by this Service Bulletin:

- Illustrated Parts Catalog.
- Maintenance Manual.
- Wiring Manual.

FALCON 900EX
F900EX -285
2. ACCOMPLISHMENT INSTRUCTIONS
A. PRELIMINARY STEPS

- (1) The aircraft must be in the maintenance configuration (Refer to **TASK 20-00-00-910-801**).
- (2) Remove the screws attaching upper fin tip fairing (**322A**) (Refer to **IPC fig. 55-30-40-10**, item 10).
- (3) Disengage upper fin tip fairing (**322A**), disconnect connector (322P) and remove upper fin tip fairing (**322A**).
- (4) Removal of the light unit assembly (Refer to **IPC fig. 33-40-10-50**):
 - Remove the PR bead coating the retainer (item 150) without removing the flexible gasket located underneath.
 - Remove the retainer, glass cover and seal (items 150, 180 and 190).
 - Remove the light unit assembly (screws item 110).

NOTE: Remove and discard gasket (item 210) if installed.

B. ANTI-COLLISION LIGHT ELECTRICAL BONDING

In accordance with **fig. 1**:

- (1) Cut out the run outs of the compound seal to obtain a plane mounting surface.
- (2) Set the mounting-base bonding strip (item 1), equipped with plate (item 8), into place on the fairing. Attach with two screws.
- (3) Fold the tab of the strip to a 90° angle with respect to the fairing's rib.
- (4) Pin the strip assembly (items 2 and 3) to the fairing.
- (5) Position the strip assembly (items 2 and 3) in contact against the RH side panel of the fairing and on strip (item 1). If necessary, rework the shape of the strips to obtain proper contact.
- (6) Remove the strip assembly (items 2 and 3).
- (7) Install double-sided adhesive tape on the face coming in contact with bonding strip (item 1).
- (8) Re-install strip assembly (items 2 and 3). Pin to hold in contact against the fairing.
- (9) Install strip (item 1) over the strip assembly, pressing firmly at the contact area.
- (10) Remove the strip assembly (items 1, 2 and 3).
- (11) Counterdrill bonding strip (item 2) to a diameter of 0.1 in (2.5 mm). Disconnect the strips and discard the adhesive tape, remove all remaining adhesive.
- (12) Enlarge the holes drilled in the strips to a diameter of 0.126 in (3.2 mm). Assemble bonding strips (items 1 and 2) using rivets (item 4). Coat the faces of the strips with **covering sealant** making a bead at the contour edge with **bead sealant**.
- (13) Clean the contact surfaces of the light unit assembly, of the strips, and of the fairing using **MEK**.
- (14) Coat the strip assembly (items 2 and 3) with **interlaying sealant**.
- (15) Connect and safety connector (4LX) to the light unit.
- (16) Set the strip assembly and the light unit assembly into place in the fairing and attach the light assembly to the fairing. Smooth out the PR in excess around the strips.

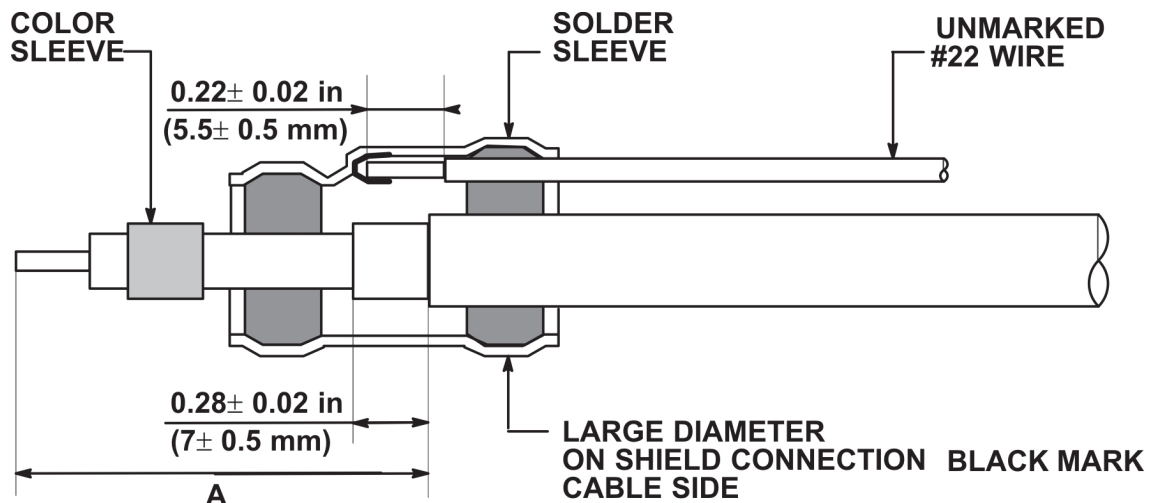
FALCON 900EX
F900EX -285

- (17) Use a shim to wedge strip assembly (items 2 and 3) in contact against the fairing's wall. Allow to cure.
- (18) Temporarily position the fairing at the fin tip and mark the location of strip (item 3).
- (19) Strip the paint off the fin tip rib at the location marked for strip (item 3). Protect the stripped area with **alodine**.
- (20) Install the retainer, glass cover and seal the gasket, the lens, and the retainer plate (Refer to **IPC fig. 33-40-10-50**, items 190, 180 and 150).
- (21) Apply a **bead sealant** around the attaching plate.

C. MODIFYING THE WIRING

Modify the shield connection in accordance with instructions depicted hereafter and using:

- **fig. 2** on aircraft with serial numbers 1, 12 and subsequent (modification F900EX M1682 factory applied),
- **fig. 3** on aircraft with serial numbers 2 through 11 if SB F900EX-25 if applied.


Dimension A:

- Connector with front extraction: 1.38 in (35 mm).
- Connector with rear extraction: 1.97 in (50 mm).

Self-soldering sleeves must be staggered at the extremity of the wiring assemblies so as to prevent a bulge on the bundle.

INSTALLING SELF-SOLDERING SLEEVES

- After stripping the shielded cable and the ground lead wire, unwind the shielding braid of cable **without overlapping the shielding strands**.
- Position the self-soldering sleeve on the stripped part of the cable.
- Insert the stripped part of the ground lead wire on the inside of the solder preform. Make sure that the ground lead wire is installed against the guide provided for this purpose.
- With hot air or infrared generator equipped with an appropriate reflector, start heating the small diameter of the self-soldering sleeve, then move up to the solder preform until it melts and flows.

FALCON 900EX
F900EX -285

Complete the operation on the large side of the self-soldering sleeve. It is recommended to position the solder preform at a 90° angle maximum in relation to the heat source. The solder must always be visible to the operator.

- The insulating sheath of the shielded cable must not be blistered nor burnt.

D. RE-ROUTING THE WIRING WITH WIRING ROUTED OVER RIB 2

In accordance with **fig. 4**:

- (1) Remove the WHELEN light unit assembly.
- (2) Drill a 0.19 in (4.9 mm) diameter hole through the rib of the fairing.
- (3) Install new clamping stud (item 5) on rib 3.
- (4) Unclamp the wiring from rib 2.
- (5) Clamp the wiring to rib 3.
- (6) Connect connector (4LX) to the WHELEN light.
- (7) Attach the light unit assembly to the fairing.
- (8) Install the gasket, the glass cover, and the retainer (Refer to **IPC fig. 33-40-10-50** , items 180, 190, 260).
- (9) Apply **bead sealant** around the retainer.

E. RE-ROUTING THE WIRING WITH WIRING ROUTED AROUND THE BACK OF FAIRING

In accordance with **fig. 5**:

- (1) Remove the WHELEN light unit assembly.
- (2) Drill a 0.19 in (4.9 mm) diameter hole through the rib 3 of the fairing.
- (3) Install new clamping stud (item 5) on rib 3.
- (4) Remove contacts from connector (4LX).
- (5) Adjust the wiring length for proper re-routing in accordance with **fig. 5**.
- (6) Fit the cut wires with new contacts and insert them into connector (4LX).
- (7) Clamp the wiring to rib 3.
- (8) Connect connector (4LX) to the WHELEN light.
- (9) Attach the light unit assembly to the fairing.
- (10) Install the gasket, the glass cover, and the retainer (Refer to **IPC fig. 33-40-10-50** , items 180, 190, 260).
- (11) Apply **bead sealant** around the retainer.

F. FINAL STEPS

- (1) Use a permanent ink pen to record the number of this Service Bulletin on "Service Bulletin Compliance" label (item 7).
- (2) Use **interlaying sealant** to bond the "Service Bulletin Compliance" label (item 7) to the inner skin of the fairing next to the P/N.
- (3) Place the fairing on the fin tip, connect connector (322P) and attach the fairing.

FALCON 900EX**F900EX -285**

- (4) Measure the electrical bonding across the anti-collision light base plate and the reference point located in the mechanic's servicing compartment (Refer to [TASK 20-20-00-910-801](#)).

The measured value must not exceed 2 mΩ.

- (5) Perform the operational test of the upper anti-collision light (Refer to [TASK 33-40-00-710-801](#)).

G. RECORDING

Record compliance with this Service Bulletin in the appropriate aircraft documents.

Fill out the card located at the end of the Service Bulletin and mail or fax it to Dassault Aviation or Dassault Falcon Jet, or fill out the electronic Service Bulletin reply form located in the "Service Bulletin" page on the Falcon portal.

FALCON 900EX
F900EX -285
3. MATERIAL INFORMATION
A. MODIFICATION KIT

KIT P/N SBF900EX0285A

(1) Mechanical kit

KIT P/N SBF900EX0285A - Mechanical kit

NEW P/N	Q T Y	KEY WORD	INSTRUCTIONS DISPOSITION	ITEM FIG
FGFB319100010	1	Mounting-base bonding strip	Supply already assembled	- (1-fig. 1) -
FGFB319100038	1	Shim		- (8-fig. 1) -
FGFB319100036	1	Strip	Supply already assembled	- (2-fig. 1) -
FGFB319100037A1	1	Strip		- (3-fig. 1) -
NAS1919M04S02WU	3	Rivet		- (4-fig. 1) -
78753	1	Studded support		- (5-fig. 4) - (5-fig. 5)
78750-02	1	Clamp		- (6-fig. 4) - (6-fig. 5)
79160	1	"Service Bulletin Compliance" label		- (7-fig. 1) -

(2) Electrical kit

KIT P/N SBF900EX0285A - Electrical kit

NEW P/N	Q T Y	KEY WORD	INSTRUCTIONS DISPOSITION	FIG
01EQTC0S20-05-119-18	1	Lug	Ground 322J	- fig. 2 - fig. 3 -
01C0K302-16S01	1	Contact	Ground 322J	- fig. 2 - fig. 3 -
01CAN210-1-20	1	#20 gauge wire L= 3.3 ft (1 m)	Ground 322J	- fig. 2 - fig. 3 -
01C0A54143FC16	4	Blanking pin	322J/P	- fig. 2 - fig. 3 -
01EQTRB23-2R	1	Self-soldering sleeve	4LX	- fig. 2 - fig. 3 -
01CAN210-1-22	1	#22 gauge CF wire L = 1 ft (0.3 m) - See NOTE 1	4LX	- fig. 2 - fig. 3 -
01CAN203-1-22Y	1	#22 gauge KZ wire L = 1 ft (0.3 m) - See NOTE 2	4LX	- fig. 2 - fig. 3 -
01EQTC0S20A03-071-22	1	Lug	4LX	- fig. 2 - fig. 3 -
01C0K345-16S01	2	Contact	4LX	- fig. 2 - fig. 3 -

FALCON 900EX
F900EX -285
KIT P/N SBF900EX0285A - Electrical kit

NEW P/N	Q T Y	KEY WORD	INSTRUCTIONS DISPOSITION	FIG
01EQTEC1-1	1	Insulating sleeve	322P	- fig. 2 - fig. 3 -
01EQTEC1-1	4	Insulating sleeve - See NOTE 3		
01EQTPRL08B01	1	Splice - See NOTE 3		
GND322J-B	2	Black sleeve with white marking 01PR0TMS3-32BK	322J	- fig. 2 - fig. 3 -
GND312J-B	2	Black sleeve with white marking 01PR0TMS3-32BK	312J	- fig. 2 - fig. 3 -
A	1	Black sleeve with white marking 01PR0TMS3-32BK	4LX	- fig. 2 - fig. 3 -
B	1	Black sleeve with white marking 01PR0TMS3-32BK	4LX	- fig. 2 - fig. 3 -
78750-01	5	Clamp	4LX	- fig. 2 - fig. 3 -

NOTE 1: Use on FALCON 900EX S/N 1 through 136 and 138 through 140.

NOTE 2: Use on FALCON 900EX S/N 137, 141 and subsequent, and FALCON 900DX.

NOTE 3: Do not use on FALCON 900EX and FALCON 900DX.

B. LOCAL PROCUREMENT

As indicated in Consumable Products Manual (CPM):

- **alodine.**
- **interlaying sealant.**
- **bead sealant.**
- **MEK or equivalent.**
- **covering sealant.**
- Green CELOMER varnish 6060B.
- Locking wire.

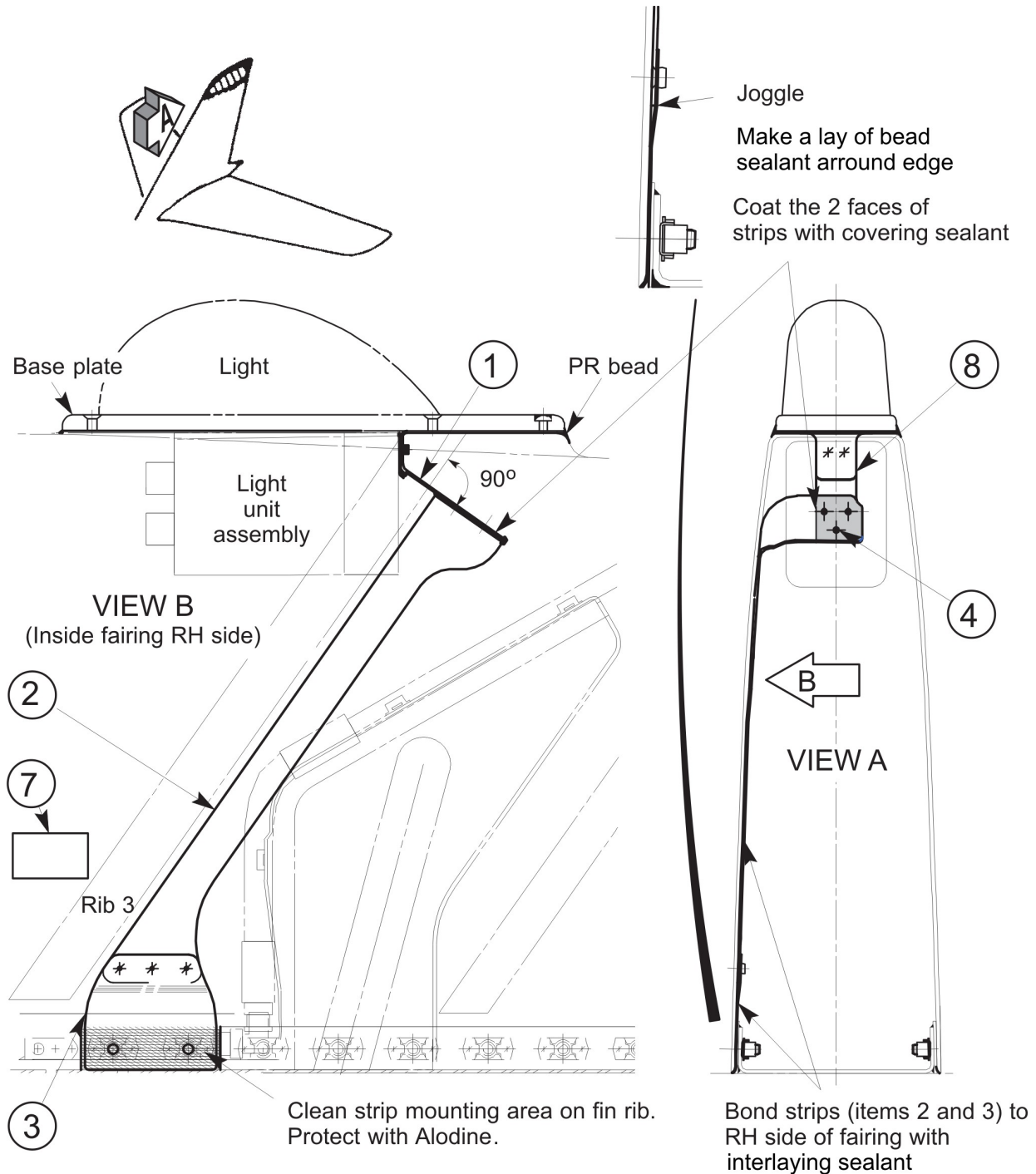
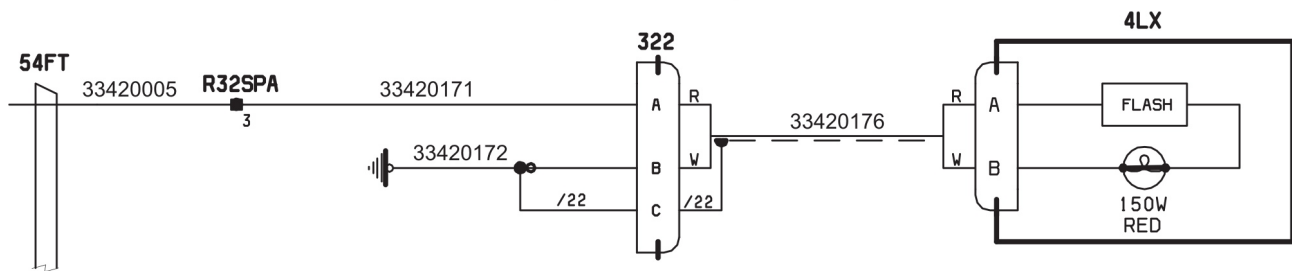
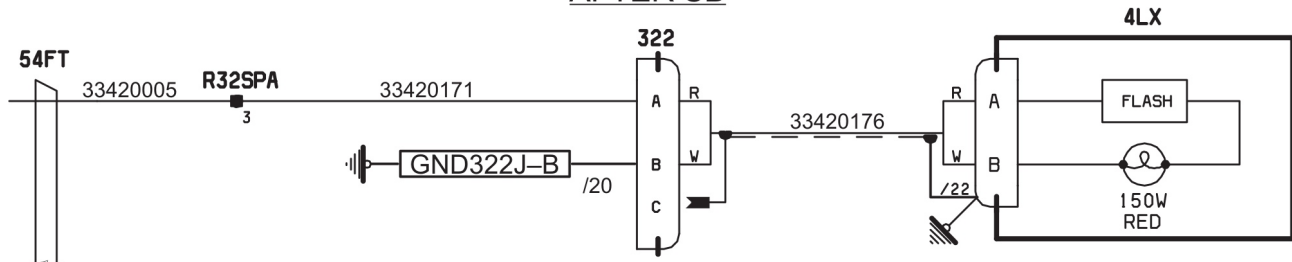


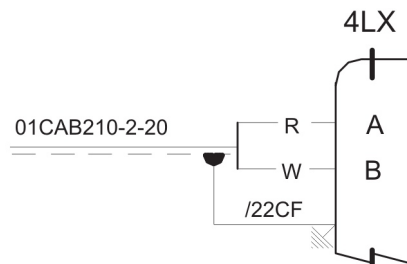
Figure 1: ELECTRICAL BONDING STRIPS INSTALLATION

FALCON 900EX
F900EX -285

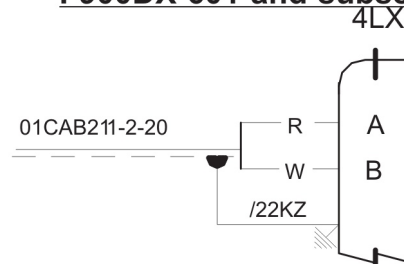
AIRCRAFT F900EX S/Ns 1, 12 THROUGH 195
 AIRCRAFT F900DX 601 THROUGH 620
 (MODIFICATION F900EX M1682 FACTORY APPLIED)

BEFORE SB

AFTER SB


AIRCRAFT F900EX S/Ns 1,
 12 through 136 and 138 through 140



AIRCRAFT F900EX S/Ns 137,
 141 and subsequent
 F900DX 601 and subsequent



**Figure 2: AIRCRAFT F900EX S/NS 1, 12 THROUGH 195 - AIRCRAFT F900DX 601 THROUGH 620
 (MODIFICATION F900EX M1682 FACTORY APPLIED)**

FALCON 900EX

F900EX -285

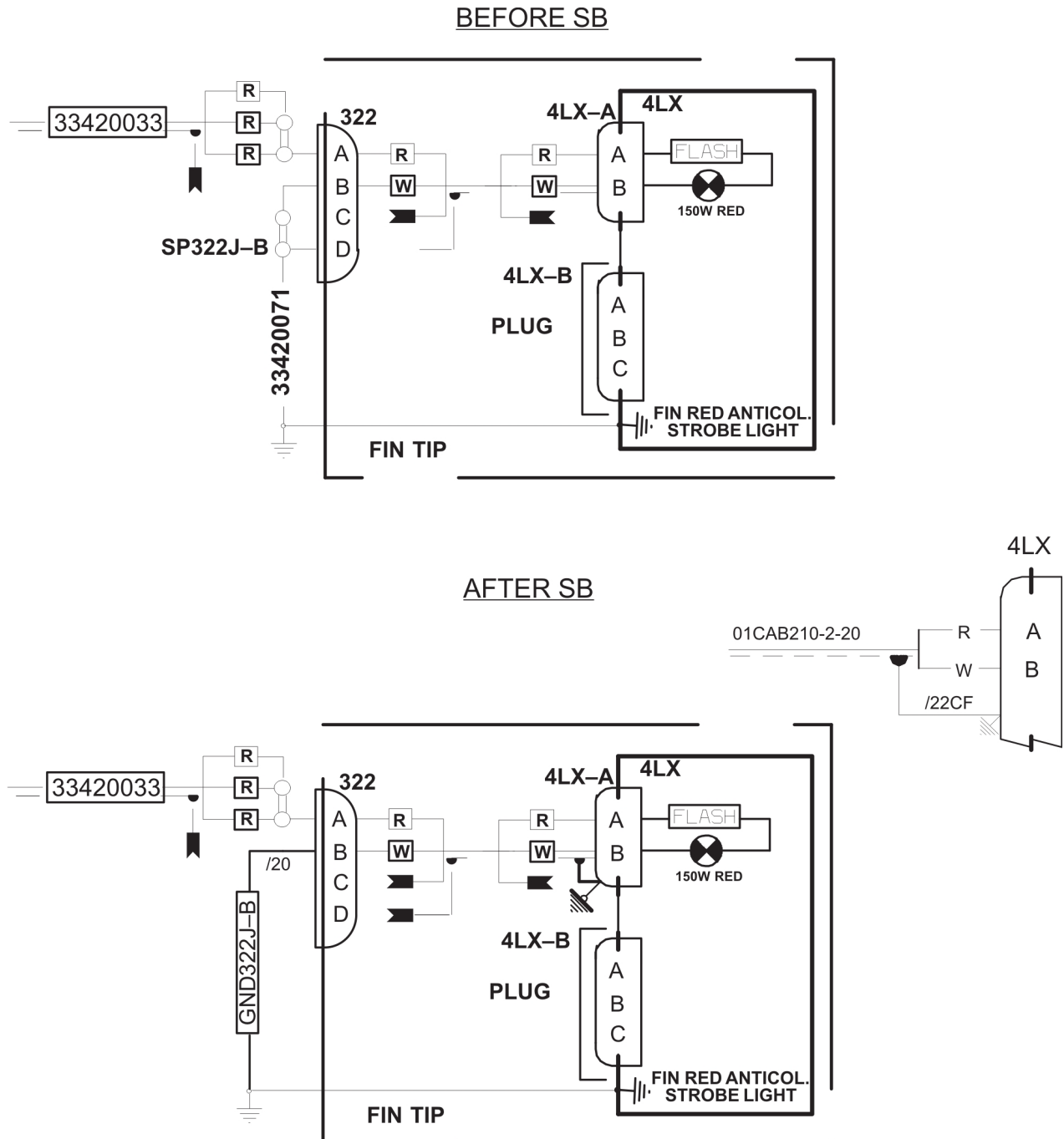


Figure 3: AIRCRAFT F900EX S/NS 2 THROUGH 11 WITH SB F900EX-25 APPLIED GND322J-B

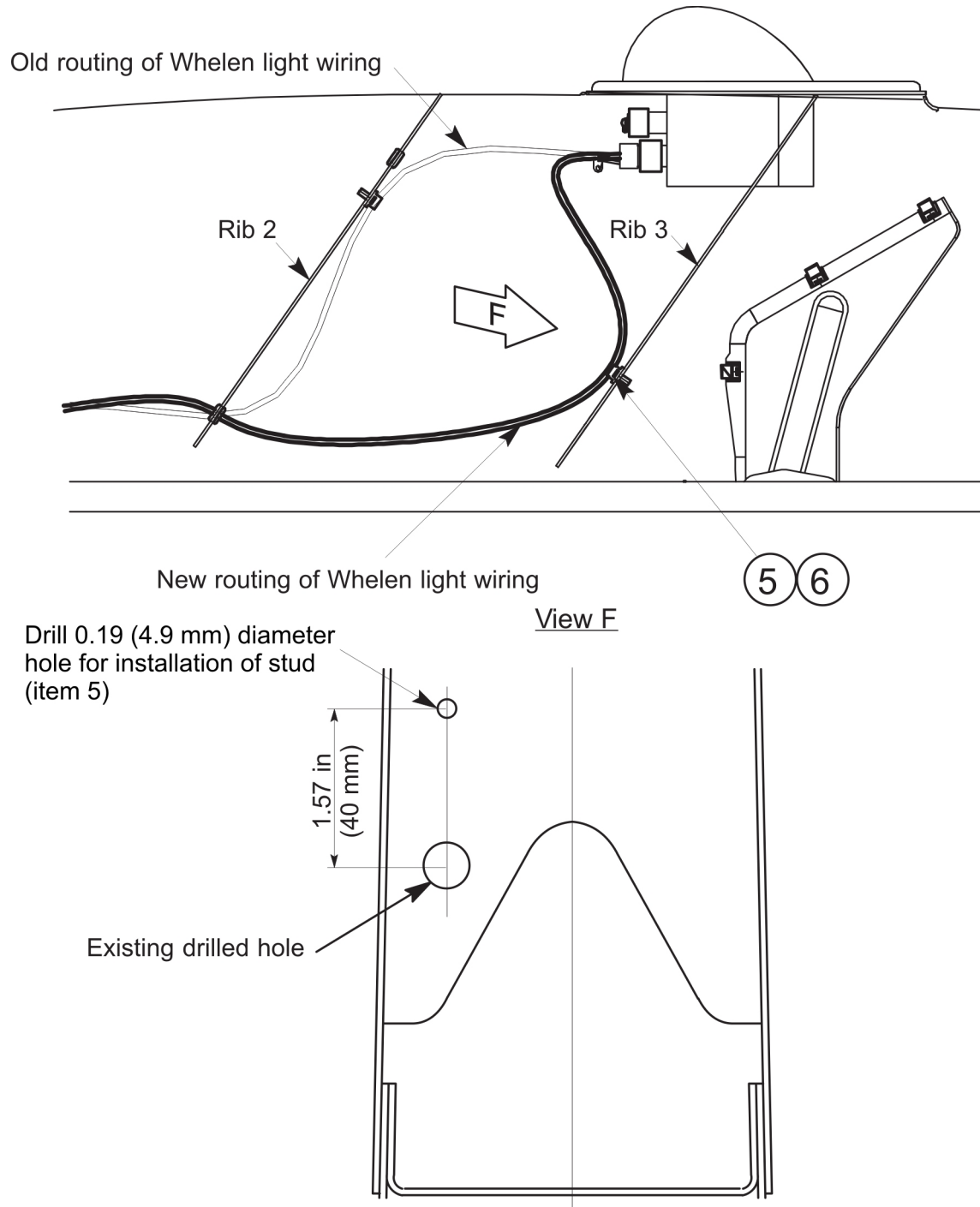
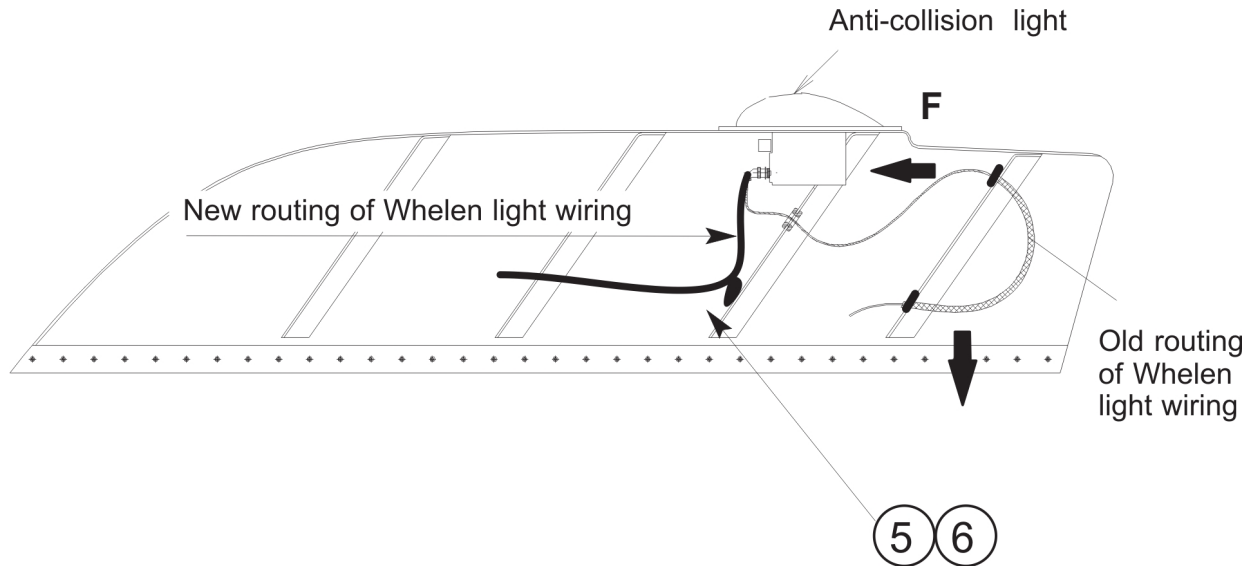


Figure 4: RE-ROUTING THE WIRING - AIRCRAFT WITH WIRING ROUTED OVER RIB 2



Drill 0.19 in (4.9 mm) diameter hole for installation of stud (item 5)

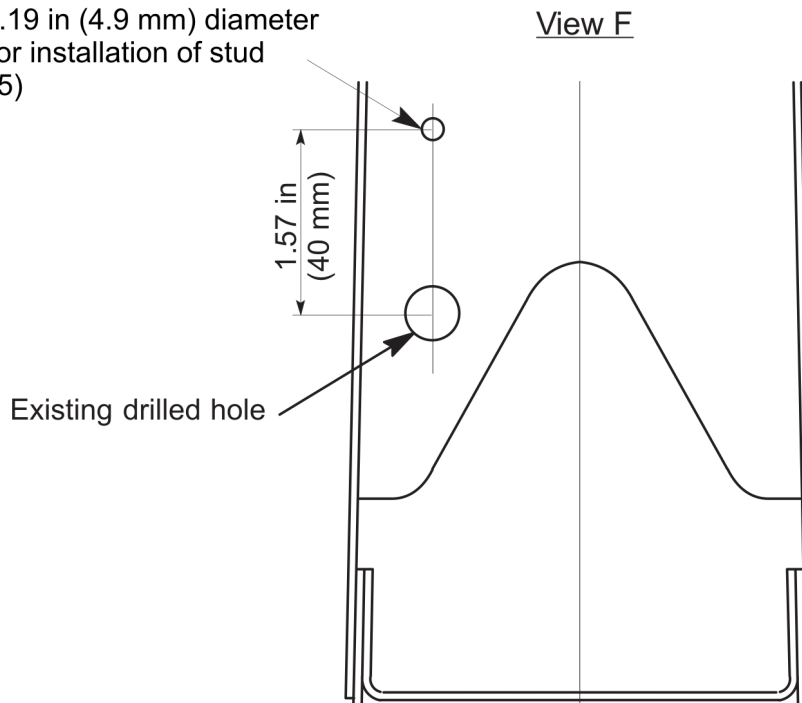


Figure 5: RE-ROUTING THE WIRING - AIRCRAFT WITH WIRING ROUTED AROUND THE BACK OF FAIRING

FROM _____

ZIP CODE _____



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



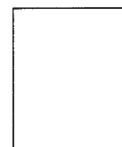
BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 3306 HACKENSACK, NJ 07602

POSTAGE WILL BE PAID BY ADDRESSEE:

DASSAULT FALCON JET CORP.
PO BOX 1946
SO HACKENSACK NJ 07606-9946

ATTENTION:
FIELD SERVICE DEPARTMENT



DASSAULT AVIATION
78, Quai Marcel Dassault
Cedex 300
92552 SAINT-CLOUD Cedex
FRANCE

A l'attention de DSC

SERVICE BULLETINS COMPLIANCE

FALCON 900EX A/C S/N

--	--	--	--

DASSAULT AVIATION Number	
F900EX	285

ATA Number		
F900EX	33	08

	Coding:
--	---------

C complete compliance
T partial compliance

--	--

--	--	--

--

--	--

--	--	--

--

Performed by:

Remarks: Revision 1

Date:

Signature:

SERVICE BULLETINS COMPLIANCE

Would you be kind enough to inform us that this Service Bulletin is complied with:

- For "Western Hemisphere", mail upper card (No postage necessary if mailed in the U.S.A.) or fax to Dassault Falcon Jet: 1-201-541-4700.
- For "Other Continents", mail card herebelow or fax to Dassault Aviation: 33 (0)1.47.11.65.21.

On the occasion, if other Service Bulletins have been simultaneously complied with could you complete the blank spaces provided for this purpose.

APPLICATION DE BULLETINS DE SERVICE

Lorsque vous aurez applique ce Bulletin de Service sur votre avion, veuillez avoir l'amabilite de nous en informer:

- Utiliser la carte reponse superieure pour continent americain (Dispensee de timbrage pour postage depuis les U.S.A.) ou le fax pour Dassault Falcon Jet : 1-201-541-4700.

- Ou la carte reponse inferieure pour autres continents ou le fax pour Dassault Aviation : 33 (0)1.47.11.65.21.

Eventuellement, si d'autres Bulletins de Service ont ete appliques simultanement, vous pouvez les mentionner dans les cases vierges prevues a cet effet.

APPLICATION DES BULLETINS DE SERVICE

SERVICE BULLETINS COMPLIANCE

FALCON 900EX A/C S/N

--	--	--	--

DASSAULT AVIATION Number Numero DASSAULT AVIATION	
F900EX	285

ATA Number Numero ATA		
F900EX	33	08

	Coding:
--	---------

C complete compliance
application totale
T partial compliance
application partielle

--	--

--	--	--

--

--	--

--	--	--

--

Performed by:
Fait par:

Remarks: Revision 1

Date:

Signature:

Remarques: Revision 1