
SERVICE BULLETIN

N° 139-577

DATE: September 21, 2021

REV. : /

TITLE

ATA 53 – LOWER INSPECTION COVER INSTALLATION

REVISION LOG

First Issue

An appropriate entry should be made in the aircraft log book upon accomplishment.
If ownership of aircraft has changed, please, forward to new owner.

1. PLANNING INFORMATION

A. EFFECTIVITY

Part I

AB139/AW139 helicopters from S/N 31005 thru S/N 31699 and from S/N 41001 thru S/N 41499.

Part II

AW139 helicopters from S/N 31700 to S/N 31977 and from S/N 41501 to S/N 41582.

NOTE

This Service Bulletin is not applicable for helicopters already equipped with the passenger hinged doors P/N 4G5212F00111.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instructions on how to perform the installation of lower inspection cover STA 3900/5700.

E. DESCRIPTION

The retromod allows the installation of new covers (LH and RH side) to improve the accessibility for corrosion inspections of frame STA 3900 and STA 5700 in the lower part of the fuselage.

F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives.

If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin the following MMH are deemed necessary.

Part I: approximately sixteen (16) MMH;

Part II: approximately ten (10) MMH.

MMH are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

PART I

WEIGHT (Kg)	ARM (mm)	MOMENT (Kgmm)
		0.34
LONGITUDINAL BALANCE	4876	1657.84
LATERAL BALANCE	0	0

PART II

WEIGHT (Kg)	ARM (mm)	MOMENT (Kgmm)
		0.177
LONGITUDINAL BALANCE	4345	769.07
LATERAL BALANCE	0	0

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	I, II
DM02 39-A-06-41-00-00A-010A-A	Access doors and panels - General data	I, II
DM03 39-A-52-12-01-00A-520A-A	Left cabin door - Remove procedure	I
DM04 39-A-52-12-02-00A-520A-A	Right cabin door - Remove procedure	I

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>	
DM05	39-A-52-12-01-00A-720A-A	Left cabin door - Install procedure	I
DM06	39-A-52-12-02-00A-720A-A	Right cabin door - Install procedure	I

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
LHD	Leonardo Spa Helicopters
MMH	Maintenance Man Hours
N.A.	Not Applicable
SB	Service Bulletin

3) ANNEX

N.A.

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

PART I

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G5330P05711		LWR INSP COVER STA 3900/5700 RETROMOD	REF	.		-
2	3G5310A80051	3G5310A80051M01	Doubler	3	..		139-577L1
3	3G5310A80052	3G5310A80052M01	Doubler	1	..		139-577L1
4	3G5310A80151	3G5310A80151A1 or 3G5310A80151M01	Cover	4	..		139-577L1
5	AN525-832R6		Screw	16	..		139-577L1
6	MS20426AD3-4		Rivet	0,1 kg	..		139-577L1
7	MS20426AD4-4		Rivet	0,1 kg	..		139-577L1
8	MS20470AD4-4		Rivet	0,1 kg	..		139-577L1
9	MS21073L08		Nut	16	..		139-577L1
10	AGS4720-407	NAS1721H4L2A	Rivet	4	.	(2)	139-577L1

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
11	3G5330P05811		LWR INSP COVER STA 3900 RETROMOD	REF	.		-
12	3G5310A80151	3G5310A80151A1 or 3G5310A80151M01	Cover	2	..		139-577L2
13	3G5310A80051	3G5310A80051M01	Doubler	2	..		139-577L2
14	AN525-832R6		Screw	8	..		139-577L2
15	MS20426AD3-4		Rivet	0,1 kg	..		139-577L2
16	MS20470AD4-4		Rivet	0,1 kg	..		139-577L2
17	MS21073L08		Nut	8	..		139-577L2

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
18	AWMS05-001, TY:I, CL:B, GR:2	Naftoseal MC-780 (C355)	AR	(1)	I, II
19	Commercial	Sealant Thixoflex (C347)	AR	(1)	I, II

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

3) LOGISTIC MATRIX

In order to apply this Service Bulletin, the following Logistic P/N can be ordered in accordance with the applicable notes:

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
139-577L1	1		I
139-577L2	1		II

NOTE

- (1) Item to be procured as local supply.
- (2) Item to be ordered if helicopter is equipped with retromod P/N 3G5306P16411.

B. SPECIAL TOOLS

N.A.

C. INDUSTRY SUPPORT INFORMATION

Product Enhancement.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
- b) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
- c) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.
- d) Protect properly all those equipment not removed from area affected by the modification during installation procedure.
- e) Let the adhesive cure at room temperature for at least 24 hours, unless otherwise specified.
- f) Exposed thread surface and nut must be protect using a layer of tectyl according to MIL-C-16173 grade I.
- g) All lengths are in mm.

PART I

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 1 and 2, gain access to the area affected by installation and perform lower inspection cover STA 3900/5700 retromod P/N 3G5330P05711 as described in the following procedure:
 - 2.1 In accordance with AMP DM 39-A-52-12-01-00A-520A-A, remove the cabin door LH from the helicopter.
 - 2.2 With reference to Figure 1 Detail A, remove the existing fasteners that attach the LH lower FWD guide P/N 3P5330A33351 to the LH lower sheet skin P/N 3P5330A13752. Keep them for later reuse.
 - 2.3 With reference to Figure 1 Detail A, remove the LH lower FWD guide

P/N 3P5330A33351 and the lower FWD LH end guide P/N 3P5330A32252 from the helicopter. Keep hardware for later reuse.

NOTE

Perform the following step 2.4 only if the helicopter is equipped with retromod P/N 3G5306P16411.

- 2.4 With reference to Figure 2 Detail B, remove the reinforcement P/N 3P5330A32551.
- 2.5 With reference to Figure 1 Detail of RWK P/N, perform n°2 cut-outs on the lower sheet skin LH P/N 3P5330A13752.
- 2.6 With reference to Figure 2 Detail of RWK P/N, perform n°2 cut-outs on the LH lower FWD guide P/N 3P5330A33351.
- 2.7 With reference to Figure 2 Detail of RWK P/N, perform the indicated cut-out on the FWD LH end guide P/N 3P5330A32252.

NOTE

Perform the following step 2.8 only if the helicopter is equipped with retromod P/N 3G5306P16411.

- 2.8 With reference to Figures 1 and 2, perform the cut-out of the reinforcement P/N 3P5330A32551 in accordance with the previously performed cut-outs.
- 2.9 With reference to Figure 1 Detail A and Figure 2 Detail B, install n°4 anchor nuts P/N MS21073L08 on the doubler P/N 3G5310A80052 by means of n°8 rivets P/N MS20426AD3-4.
- 2.10 With reference to Figure 1 Detail A and Figure 2 Detail B, temporarily locate the doubler P/N 3G5310A80052 on the LH lower sheet skin P/N 3P5330A13752, countermark and drill n°17 rivet holes thru the skin.
- 2.11 With reference to Figure 1 Detail A and Figure 2 Detail B, install the doubler P/N 3G5310A80052 on the LH lower sheet skin P/N 3P5330A13752 by means of n°16 rivets P/N MS20470AD4-4 and the rivet P/N MS20426AD4-4.
- 2.12 With reference to Figure 1 Detail A and Figure 2 Detail B, fill all around the doubler P/N 3G5310A80052 by means of the Naftoseal MC-780 (C355).
- 2.13 With reference to Figure 1 Detail A and Figure 2 Detail B, install the cover P/N 3G5310A80151 on the doubler P/N 3G5310A80052 by means of n°4 screws P/N AN525-832R6.
- 2.14 With reference to Figure 1 Detail A and Figure 2 Detail B, apply the sealant (C347) along the perimeter of the cover P/N 3G5310A80151.
- 2.15 With reference to Figure 1 Detail A and Figure 2 Detail C, install n°4 anchor nuts P/N MS21073L08 on the doubler P/N 3G5310A80051 by means of n°8 rivets

- P/N MS20426AD3-4.
- 2.16 With reference to Figure 1 Detail A and Figure 2 Detail C, temporarily locate the doubler P/N 3G5310A80051 on the LH lower sheet skin P/N 3P5330A13752, countermark and drill n°22 rivet holes thru the skin.
 - 2.17 With reference to Figure 1 Detail A and Figure 2 Detail C, install the doubler P/N 3G5310A80051 on the LH lower sheet skin P/N 3P5330A13752 by means of n°22 rivets P/N MS20470AD4-4.
 - 2.18 With reference to Figure 1 Detail A and Figure 2 Detail C, fill all around the doubler P/N 3G5310A80051 by means of the Naftoseal MC-780 (C355).
 - 2.19 With reference to Figure 1 Detail A and Figure 2 Detail C, install the cover P/N 3G5310A80151 on the doubler P/N 3G5310A80051 by means of n°4 screws P/N AN525-832R6.
 - 2.20 With reference to Figure 1 Detail A and Figure 2 Detail C, apply the sealant (C347) along the perimeter of the cover P/N 3G5310A80151.

NOTE

Perform the following steps 2.21 and 2.22 only if the reinforcement P/N 3P5330A32551 has been previously removed.

- 2.21 With reference to Figure 2 Detail B, temporarily locate the reinforcement P/N 3P5330A32551 in its position on the LH lower sheet skin P/N 3P5330A13752 and drill n°2 rivet holes in accordance with the dimensioning shown.
- 2.22 With reference to Figure 2 Detail B, install the reinforcement P/N 3P5330A32551 on the LH lower sheet skin P/N 3P5330A13752 by means of n°2 rivets P/N AGS4720-407.
- 2.23 With reference to Figure 1, install the LH lower FWD guide P/N 3P5330A33351 on the LH lower sheet skin P/N 3P5330A13752 by means of retained hardware.
- 2.24 With reference to Figure 1, install the lower FWD LH end guide P/N 3P5330A32252 on the LH lower sheet skin P/N 3P5330A13752 by means of retained hardware.
- 2.25 In accordance with AMP DM 39-A-52-12-01-00A-720A-A, install the cabin door LH on the helicopter.
- 2.26 In accordance with AMP DM 39-A-52-12-02-00A-520A-A, remove the cabin door RH from the helicopter.
- 2.27 With reference to Figure 1 Detail A, remove the existing fasteners that attach the RH lower FWD guide P/N 3P5330A33251 to the RH lower sheet skin

P/N 3P5330A13851. Keep them for later reuse.

- 2.28 With reference to Figure 1 Detail A, remove the RH lower FWD guide P/N 3P5330A33251 and the lower FWD RH end guide P/N 3P5330A32452 from the helicopter. Keep hardware from later reuse.

NOTE

Perform the following step 2.29 only if the helicopter is equipped with retromod P/N 3G5306P16411.

- 2.29 With reference to Figure 2 Detail B, remove the reinforcement P/N 3P5330A32551.
- 2.30 With reference to Figure 1 and 2, repeat steps from 2.5 thru 2.8 for the RH side to rework the RH lower sheet skin P/N 3P5330A13851, the RH lower FWD guide P/N 3P5330A33251, the FWD RH end guide P/N 3P5330A32452 and the reinforcement P/N 3P5330A32551.
- 2.31 With reference to Figure 1 Detail A and Figure 2 Detail B, install n°4 anchor nuts P/N MS21073L08 on the doubler P/N 3G5310A80051 by means of n°8 rivets P/N MS20426AD3-4.
- 2.32 With reference to Figure 1 Detail A and Figure 2 Detail B, temporarily locate the doubler P/N 3G5310A80051 on the RH lower sheet skin P/N 3P5330A13851, countermark and drill n° 20 rivet holes.
- 2.33 With reference to Figure 1 Detail A and Figure 2 Detail B, install the doubler P/N 3G5310A80051 on the RH lower sheet skin P/N 3P5330A13851 by means of n°19 rivets P/N MS20470AD4-4 and the rivet P/N MS20426AD4-4.
- 2.34 With reference to Figure 1 Detail A and Figure 2 Detail B, fill all around the doubler P/N 3G5310A80051 by means of the Naftoseal MC-780 (C355).
- 2.35 With reference to Figure 1 Detail A and Figure 2 Detail B, install the cover P/N 3G5310A80151 on the doubler P/N 3G5310A80051 by means of n°4 screws P/N AN525-832R6.
- 2.36 With reference to Figure 1 Detail A and Figure 2 Detail B, apply the sealant (C347) along the perimeter of the cover P/N 3G5310A80151.
- 2.37 With reference to Figure 1 Detail A and Figure 2 Detail C, repeat steps from 2.15 thru 2.20 to install the doubler P/N 3G5310A80051 and the cover P/N 3G5310A80151 on the RH lower sheet skin P/N 3P5330A13851.

NOTE

Perform the following steps 2.38 and 2.39 only if the reinforcement P/N 3P5330A32551 has been previously removed.

- 2.38 With reference to Figure 2 Detail B, temporarily locate the reinforcement P/N 3P5330A32551 in its position on the RH lower sheet skin P/N 3P5330A13851 and drill n°2 rivet holes in accordance with the dimensioning shown.
- 2.39 With reference to Figure 2 Detail B, install the reinforcement P/N 3P5330A32551 on the RH lower sheet skin P/N 3P5330A13851 by means of n°2 rivets P/N AGS4720-407.
- 2.40 With reference to Figure 1, install the RH lower FWD guide P/N 3P5330A33251 and on the RH lower sheet skin P/N 3P5330A13851 by means of retained hardware.
- 2.41 With reference to Figure 1, install the lower FWD RH end guide P/N 3P5330A32452 on the RH lower sheet skin P/N 3P5330A13851 by means of retained hardware.
- 2.42 In accordance with AMP DM 39-A-52-12-02-00A-720A-A, install the cabin door RH on the helicopter.
3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

PART II

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figure 3, gain access to the area affected by installation and perform lower inspection cover STA 3900 retromod P/N 3G5330P05811 as described in the following procedure:
 - 2.1 With reference to Figure 3 Detail of RWK P/N, perform n°2 cut-outs on the skin LH P/N 3G5330A53052.
 - 2.2 With reference to Figure 3 Detail A and Detail B, install n°4 anchor nuts P/N MS21073L08 on the doubler P/N 3G5310A80051 by means of n°8 rivets P/N MS20426AD3-4.
 - 2.3 With reference to Figure 3 Detail A and Detail B, temporarily locate the doubler P/N 3G5310A80051 on the skin LH P/N 3G5330A53052, countermark and drill n° 22 rivet holes.
 - 2.4 With reference to Figure 3 Detail A and Detail B, install the doubler P/N 3G5310A80051 on the skin LH P/N 3G5330A53052 by means of n°22 rivets P/N MS20470AD4-4.
 - 2.5 With reference to Figure 3 Detail A and Detail B, fill all around the doubler P/N 3G5310A80051 by means of the Naftoseal MC-780 (C355).
 - 2.6 With reference to Figure 3 Detail A and Detail B, install the cover P/N 3G5310A80151 on the doubler P/N 3G5310A80051 by means of n°4 screws P/N AN525-832R6.
 - 2.7 With reference to Figure 3 Detail A and Detail B, apply the sealant (C347) along the perimeter of the cover P/N 3G5310A80151.
 - 2.8 With reference to Figure 3 Detail of RWK P/N, repeat step 2.1 to rework the skin RH P/N 3G5330A53152.
 - 2.9 With reference to Figure 3, repeat steps from 2.2 thru 2.8 to install the cover P/N 3G5310A80151 and the doubler P/N 3G5310A80051 on the RH side.
3. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
4. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
5. Send the attached compliance form to the following mail box:

engineering.support.lhd@leonardocompany.com

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

S.B. N°139-577
DATE: September 21, 2021
REVISION: /

LWR INSPECTION COVER STA 3900/5700 RETROMOD
3G5330P05711

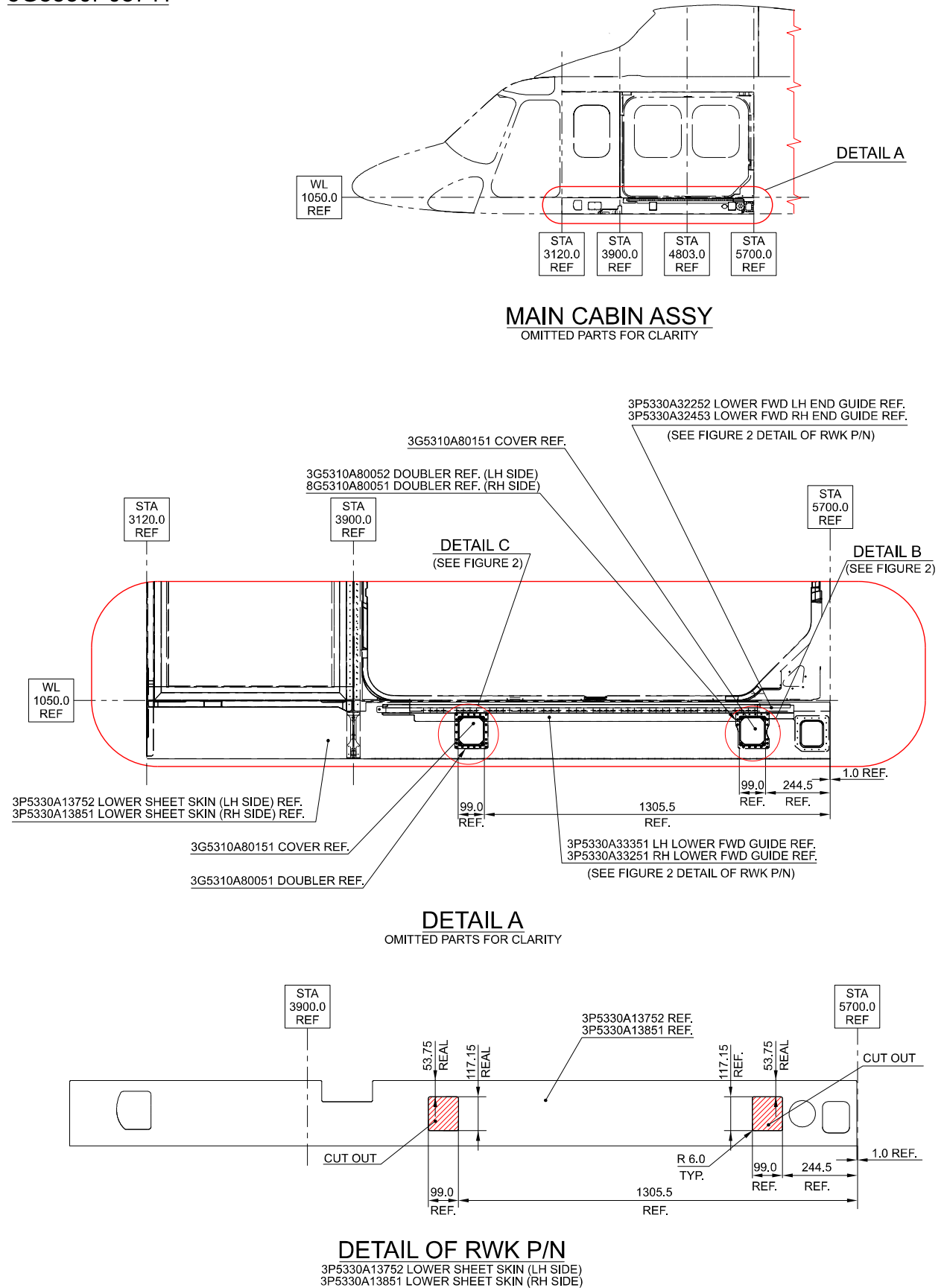
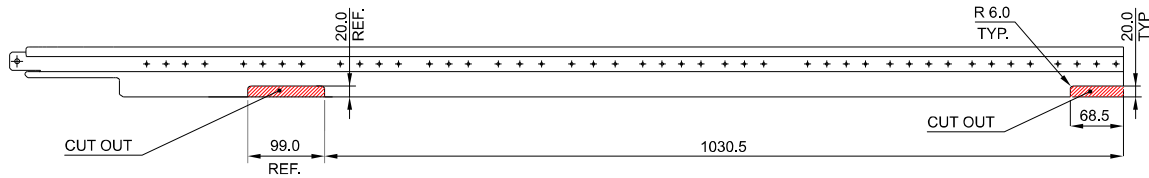
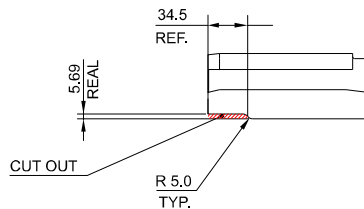
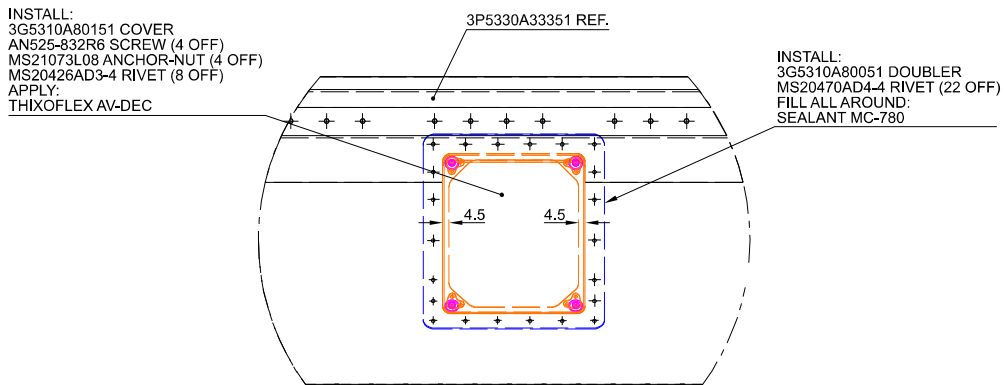
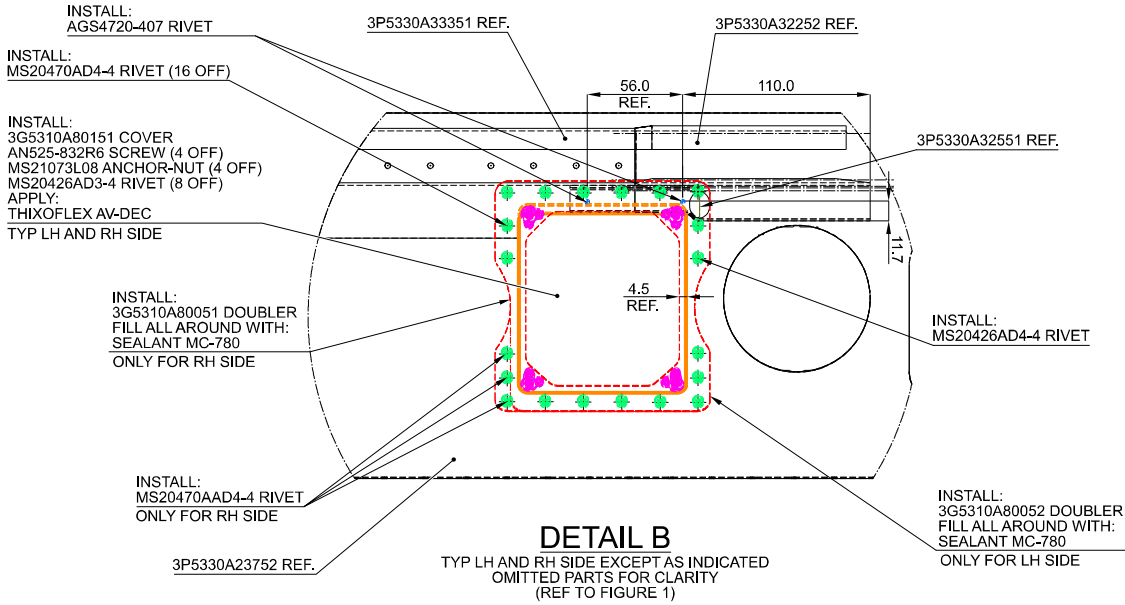


Figure 1



DETAIL OF RWK P/N

3P5330A33351 LH LOWER FWD GUIDE
3P5330A33251 RH LOWER FWD GUIDE
(REF TO FIGURE 1)

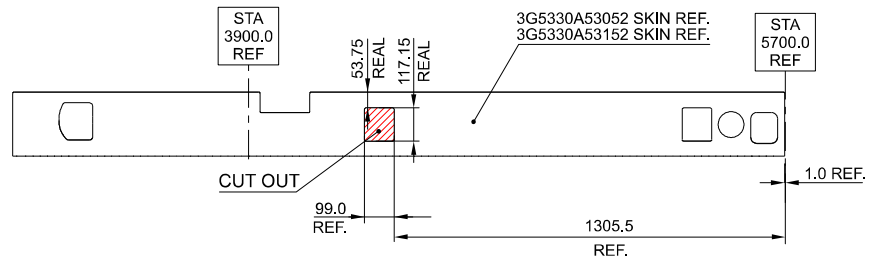
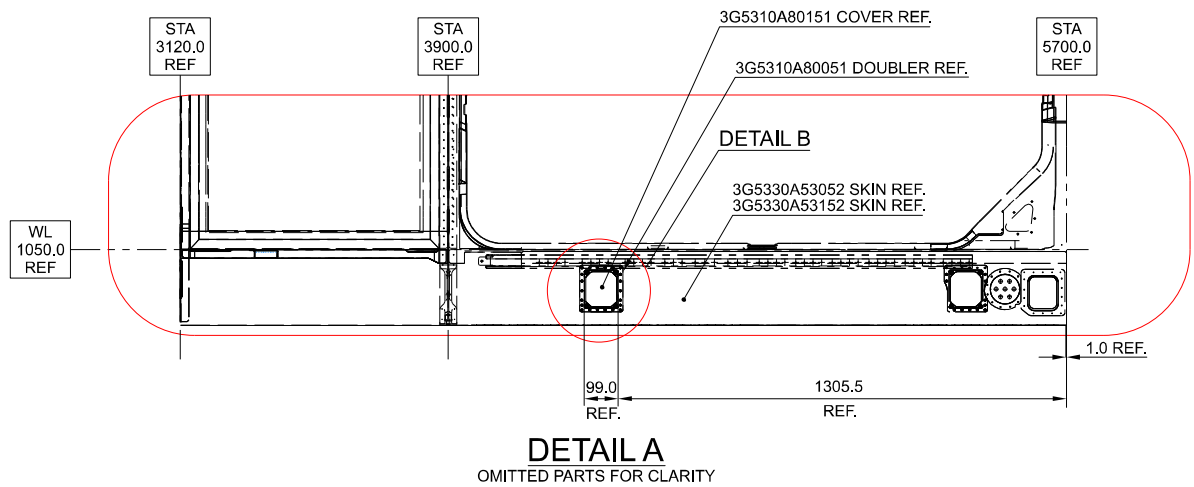
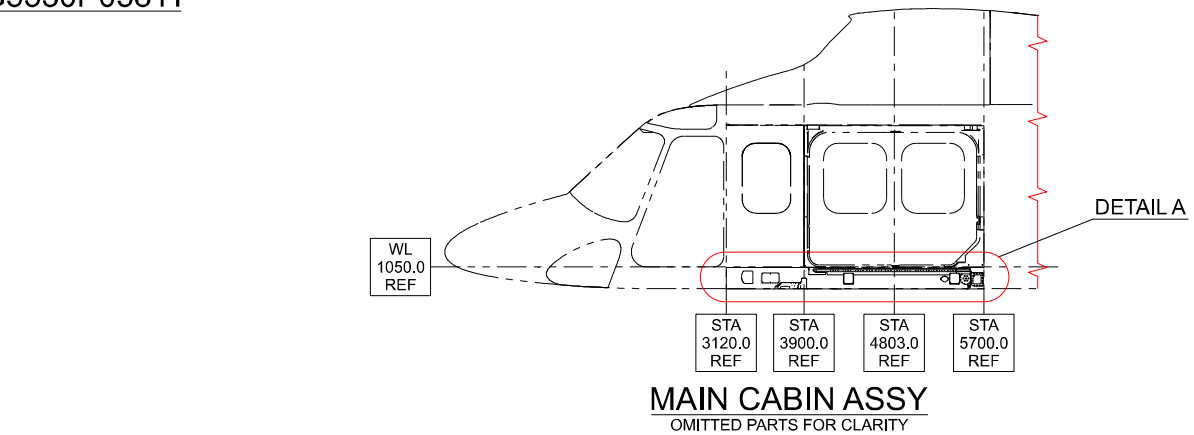


DETAIL OF RWK P/N

3P5330A32251 LOWER FWD LH GUIDE
3P5330A32451 LOWER FWD RH GUIDE
(REF TO FIGURE 1)

Figure 2

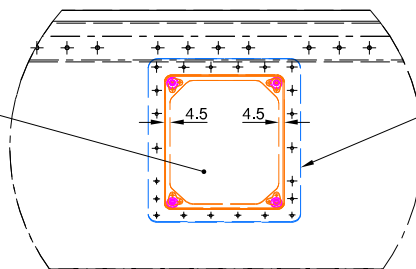
LWR INSPECTION COVER STA 3900/5700 RETROMOD
3G5330P05811



DETAIL OF RWK P/N

3G5330A53052 SKIN LH
3G5330A53152 SKIN RH

INSTALL:
3G5310A80151 COVER
AN525-332R6 SCREW (4 OFF)
MS21073L08 ANCHOR-NUT (4 OFF)
MS20426AD3-4 RIVET (8 OFF)
APPLY:
THIXOFLEX AV-DEC



INSTALL:
3G5310A80051 DOUBLER
MS20470AD4-4 RIVET (22 OFF)
FILL ALL AROUND WITH:
SEALANT MC-780

DETAIL B
OMITTED PARTS FOR CLARITY

Figure 3

