
SERVICE BULLETIN

N° 189-269

DATE: April 12, 2021

REV. : /

TITLE

ATA 30 – STA5700 INSPECTION OF WATER DRAIN FLEXIBLE TUBINGS

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

AW189 helicopters from S/N 49007 to S/N 49067 (S/N's 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89012 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010.

Part II

AW189 helicopters that require the replacement of water drain flexible tubing after compliance with Part I inspection.

B. COMPLIANCE

Part I

Within the first scheduled four (4) years inspection after the issue of this Service Bulletin.

Part II

To be performed at the same time of Part I of this SB, if replacement of water drain flexible tubing is required from application of Part I

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to perform the visual inspection for clearance between the water drain flexible tubing and the roof structure at STA5700. In case of damage to the drain tubes, this SB gives instructions how to replace them with new tubes.

E. DESCRIPTION

LHD identified a possible interference between the water drain flexible tubing and the fuselage roof structure at STA5700.

Part I of this Service Bulletin provides the necessary instruction on how to perform the visual inspection to check the clearance between the water drain flexible tubing and the roof structure and to check the condition of the tubing. In case of interference with the structure, as corrective action, the SB gives instructions to apply an anti fretting tape to the surface of the tube to prevent further fretting between the parts.

Part II of this Service Bulletin gives instructions for the replacement of the flexible tubing that have been found damaged after the inspection of Part I.

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 twenty (20) MMH;

Part II: approximately forty (40) MMH;

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

H. WEIGHT AND BALANCE

PART I

N.A.

PART II

N.A.

I. REFERENCES

1) PUBLICATIONS

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 89-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance.	All
DM02 89-A-06-41-00-00A-010A-A	Access doors and panels - General data	All
DM03 89-A-25-80-00-00A-010A-A	Insulation and lining - General data	All

2) ACRONYMS

AMP	Aircraft Maintenance Publication
AMDI	Aircraft Material Data Information
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
LHD	Leonardo Spa Helicopters
ITEP	Illustrated Tools and Equipment Publication
MMH	Maintenance Man Hours

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

N.A.

PART II

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	A413A24-560		Flexible tubing	REF	.	(1)(2)	-
2	A413A24-1920		Flexible tubing	REF	.	(1)	-
3	A413A24-2060		Flexible tubing	REF	.	(1)(3)	-
4	AW001CK05HS		Tie strap	6	.	(2)	-
5	AW001CK05HS		Tie strap	12	.	(3)	-

2) CONSUMABLES

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

#	Spec./LHD code number	DESCRIPTION	Q.TY	NOTE	PART
6	A413A24	Flexible tubing	AR	(1)(4)	II
7	TT50 260SS	Teflon tape 3M 5453 (C223)	AR	(5)	All
8	AWMS05-001 Type 1, Class B, Grade 2	Sealant MC-780B (C465)	AR	(5)	II

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

3) LOGISTIC MATRIX

N.A.

NOTE

- (1) These items will not be supplied. Rework the raw flexible tubing P/N A413A24 supplied to obtain the P/N listed in the "required materials" table. The final dash number in the P/N is the final length in mm.
- (2) Item applicable only to helicopters from S/N 49056 to S/N 49067 that are equipped with water drain lines installation P/N 8G3070A01013.

(3) Item applicable only to helicopters from S/N 49007 to S/N 49055 (S/N's 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89012 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010 equipped with water drain lines installations P/N 8G3070A01011 or P/N 8G3070A01012 or P/N 8G3070A01411.

(4) The required quantities are as follows:

- 3 m for helicopters from S/N 49056 to S/N 49067 that are equipped with water drain lines installation P/N 8G3070A01013;
- 5 m for helicopters from S/N 49007 to S/N 49055 (S/N's 49024, 49036, 49040 and 49041 excluded), from S/N 89001 to S/N 89012 (S/N's 89005 and 89006 excluded) and from S/N 92001 to S/N 92010, that are equipped with water drain lines installation P/N 8G3070A01011 or P/N 8G3070A01012 or P/N 8G3070A01411.

(5) Item to procured as local supply.

B. SPECIAL TOOLS

The following special tools, or equivalent, are necessary to accomplish this Service Bulletin:

#	P/N	DESCRIPTION	Q.TY	NOTE	PART
9	Commercial	Sourcelight	1		I

Refer also to ITEP for the special tools required to comply with the AMP DM referenced in the accomplishment instructions.

C. INDUSTRY SUPPORT INFORMATION

Warranty: Owners/Operators who comply with the instructions of this Service Bulletin no later than the applicable date in the "Compliance" section will be eligible to receive required materials on free of charge basis, except for Consumable Materials and Special Tools.

NOTE: Customers who fail to comply with the instructions in this Service Bulletin before the compliance date are not eligible for the aforementioned special policy.

Please Issue relevant MMIR form to your Warranty Administration Dpt..

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) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.
- c) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.
- d) Exposed thread surface and nut must be protect using a layer of Tectyl according to MIL-C-16173 grade I.
- e) All lengths are in mm.

PART I

- 1. In accordance with AMP DM 89-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 89-A-25-80-00-00A-010A-A and with reference to Figures 1 or 2, remove cabin internal linings installed nearby work area at STA5700 as required.
- 3. With reference to Figure 3, gain access to the area affected by the inspection.

NOTE

Ref. to Figure 3 Detail A to inspect the flexible tubing on LH side of the helicopter and to Figure 3 Detail B to inspect the flexible tubing on RH side of the helicopter.

- 4. With reference to Figures 3, perform a visual inspection on the indicated areas as follow:
 - 4.1 With reference to Figure 3 Detail A or Detail B, check any interference between the flexible tubing and the structure panel. If necessary, use the sourcelight.
 - 4.2 If any interference is found, check for cracks and sliding wear that may have occurred on the flexible tubing, otherwise skip to step 6.
 - 4.3 If cracks or sliding wear are found on the flexible tubing, proceed with Part II of this Service Bulletin to replace it and proceed to step 5.

5. With reference to Figure 4 View C or Figure 5 View F or Figure 6 View H, apply Teflon tape 3M 5453 (C223) on the flexible tubing in the area where interference was found.
6. Return the helicopter to flight configuration and record for compliance with Part I of this Service Bulletin on the helicopter logbook.
7. 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

NOTE

Perform Part II only if a drain tube has been found damaged during the inspection performed in Part I of this Service Bulletin.

NOTE

To replace the flexible tubing P/N A413A24-1920 on the RH side of the helicopter, perform the following Step 1.

1. With reference to Figure 4, if it is necessary replace the damaged flexible tubing P/N A413A24-1920 with new one as described in the following procedure:
 - 1.1 In accordance with AMP DM 89-A-25-80-00-00A-010A-A and with reference to Figure 4, remove internal linings installed nearby work area at STA5700 as required.
 - 1.2 With reference to Figure 4, remove the damaged flexible tubing P/N A413A24-1920 from the existing drains. Retain the clamps for later reuse.
 - 1.3 With reference to Figure 4, locate the new flexible tubing P/N A413A24-1920 between the existing tee assy P/N 3G3070A02531 and existing pipe assy P/N 4F3070A00931.

NOTE

Before connecting flexible tubing to tee assemblies, apply sealant MC-780B (C465) to the mating surfaces on tee assy.

- 1.4 With reference to Figure 4 View C, connect flexible tubing P/N A413A24-1920 to existing tee assy P/N 3G3070A02531 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 1.5 With reference to Figure 4 Detail E, connect flexible tubing P/N A413A24-1920 to existing pipe assy P/N 4F3070A00931 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 1.6 With reference to Figure 4 View C, apply Teflon tape 3M 5453 (C223) on the flexible tubing in the area where may occur interference between the flexible tubing and the structure panel.
- 1.7 With reference to Figure 4 View C, secure to existing support the flexible tubing P/N A413A24-1920 by means of previously removed clamp and relative hardware.
- 1.8 With reference to Figure 4 Section D-D, secure to existing supports the flexible tubing P/N A413A24-1920 by means of n°6 tie straps AW001CK05HS.

NOTE

To replace the flexible tubing P/N A413A24-560 on the left side of the helicopters equipped with water drain lines installation P/N 8G3070A01013, perform the following Step 2.

2. With reference to Figure 5, if it is necessary replace the damaged flexible tubing P/N A413A24-560 with new one as described in the following procedure:
 - 2.1 In accordance with AMP DM 89-A-25-80-00-00A-010A-A and with reference to Figure 5, remove internal linings installed nearby work area at STA5700 as required.
 - 2.2 With reference to Figure 5, remove the damaged flexible tubing P/N A413A24-560 from the existing drains. Retain the clamps for later reuse.
 - 2.3 With reference to Figure 5, locate the new flexible tubing P/N A413A24-560 between the existing tee assemblies P/N 3G3070A02531 and P/N 3G3070A08331.

NOTE

Before connecting flexible tubing to tee assemblies, apply sealant MC-780B (C465) to the mating surfaces on tee assy.

- 2.4 With reference to Figure 5 View F, connect flexible tubing P/N A413A24-560 to existing tee assy P/N 3G3070A02531 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 2.5 With reference to Figure 5 View G, connect flexible tubing P/N A413A24-560 to existing tee assy P/N 3G3070A08331 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 2.6 With reference to Figure 5 View F, apply teflon tape 3M 5453 (C223) on the flexible tubing in the area where may occur interference between the flexible tubing and the structure panel.
- 2.7 With reference to Figure 5 View F, secure to existing supports the flexible tubing P/N A413A24-560 by means of previously removed clamps and relative hardware.

NOTE

To replace the flexible tubing P/N A413A24-2060 on the left side of the helicopter perform the following Step 3.

3. With reference to Figure 6, if it is necessary replace the damaged flexible tubing P/N A413A24-2060 with new one as described in the following procedure:

- 3.1 In accordance with AMP DM 89-A-25-80-00-00A-010A-A and with reference to Figure 6, remove internal linings installed nearby work area at STA5700 as required
- 3.2 With reference to Figure 6, remove the damaged flexible tubing P/N A413A24-2060 from the existing drains. Retain the clamps for later reuse.
- 3.3 With reference to Figure 6, locate the new flexible tubing P/N A413A24-2060 between the existing tee assy P/N 3G3070A02531 and existing pipe assy P/N 4F3070A00931.

NOTE

Before connecting flexible tubing to tee assemblies,
apply sealant MC-780B (C465) to the mating surfaces
on tee assy.

- 3.4 With reference to Figure 6 View H, connect flexible tubing P/N A413A24-2060 to existing tee assy P/N 3G3070A02531 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 3.5 With reference to Figure 6 Detail K, connect flexible tubing P/N A413A24-2060 to existing pipe assy P/N 4F3070A00931 by means of previously removed hose clamp P/N NAS1922-0125-3H.
- 3.6 With reference to Figure 6 View H, apply Teflon tape 3M 5453 (C223) on the flexible tubing in the area where may occur interference between the flexible tubing and the structure panel.
- 3.7 With reference to Figure 6 View H, secure to existing support the flexible tubing P/N A413A24-2060 by means of previously removed clamp and relative hardware.
- 3.8 With reference to Figure 6 Section J-J, secure to existing supports the flexible tubing P/N A413A24-2060 by means of n°6 tie straps AW001CK05HS.
4. In accordance with AMP DM 89-A-25-80-00-00A-010A-A and with reference to Figure 4 and Figures 5 or 6, re-install internal linings previously removed.
5. Remove all the tools and other items from the work area.
6. Return the helicopter to flight configuration and record for compliance with Part II of this Service Bulletin on the helicopter logbook.
7. 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".

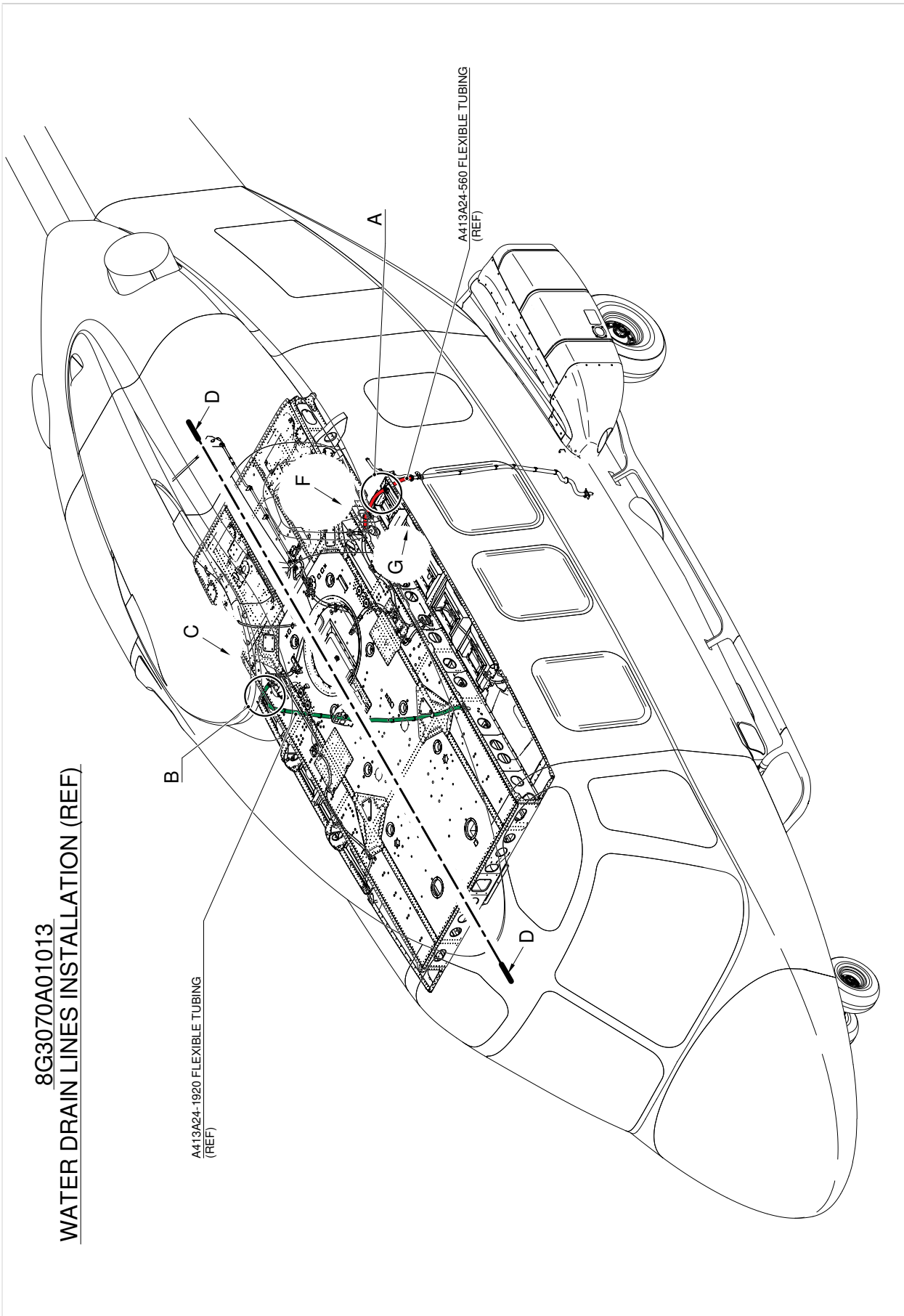
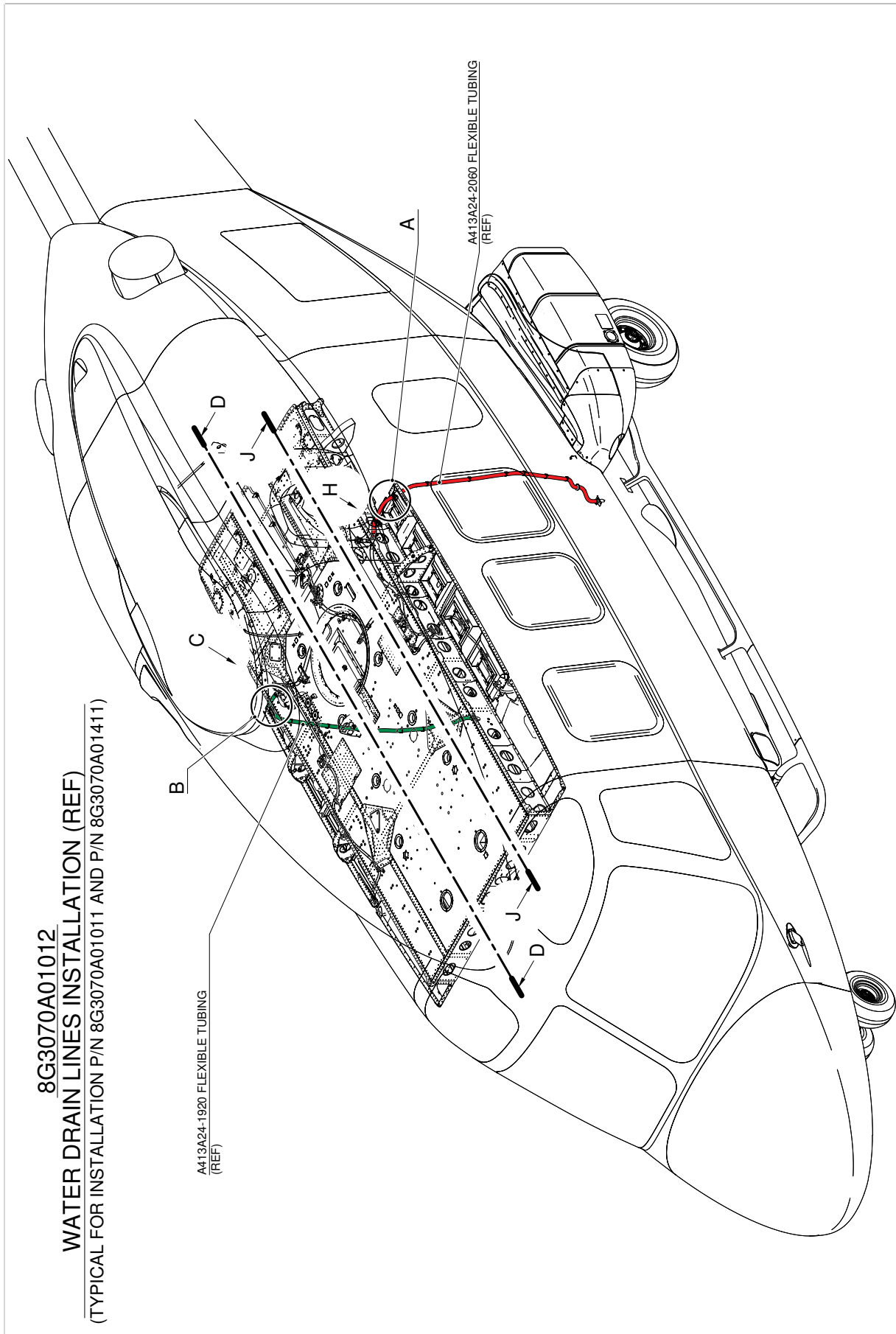


Figure 1



8G3070A01012
WATER DRAIN LINES INSTALLATION (REF)
(TYPICAL FOR INSTALLATION P/N 8G3070A01011 AND P/N 8G3070A01411)

Figure 2

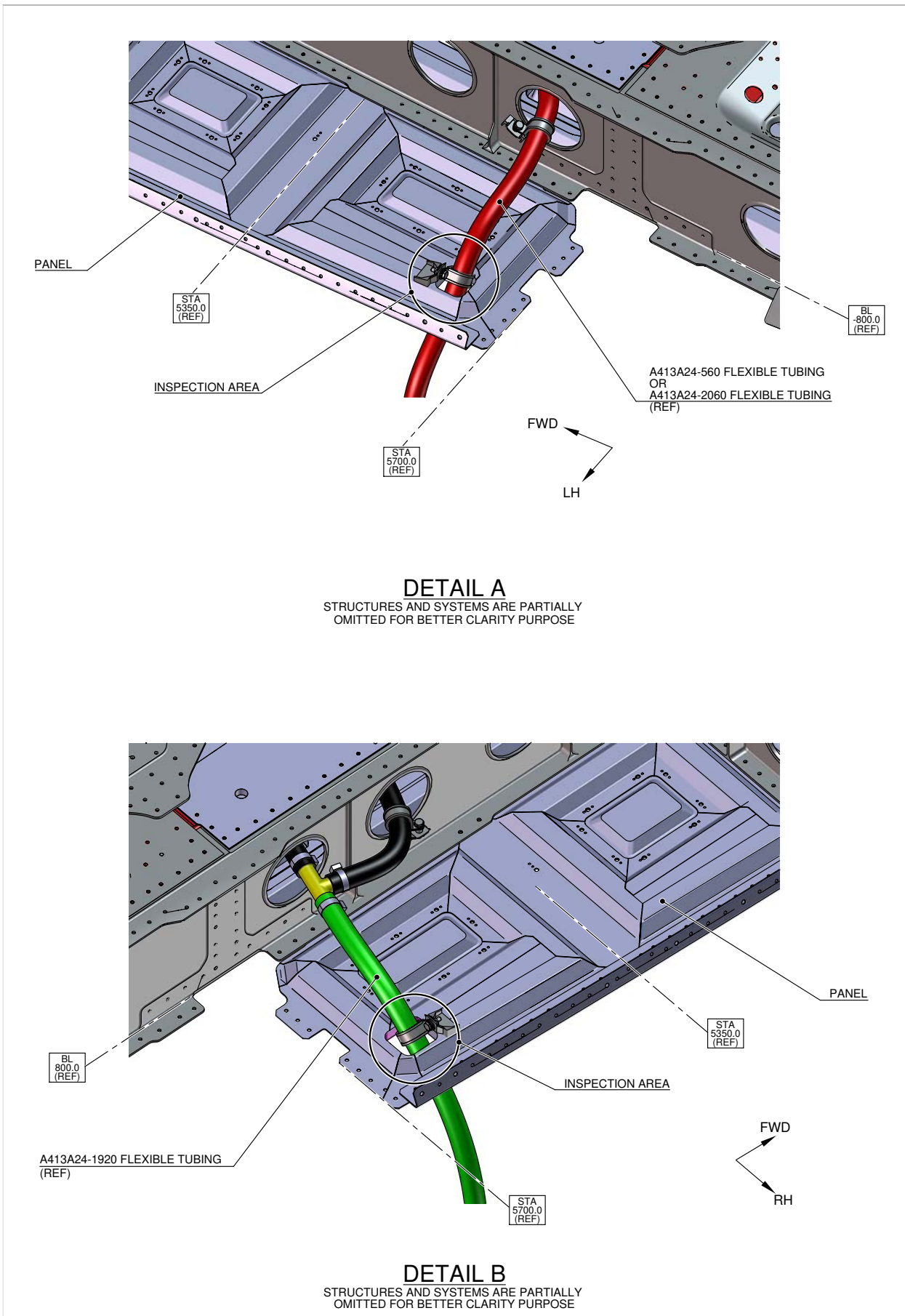


Figure 3

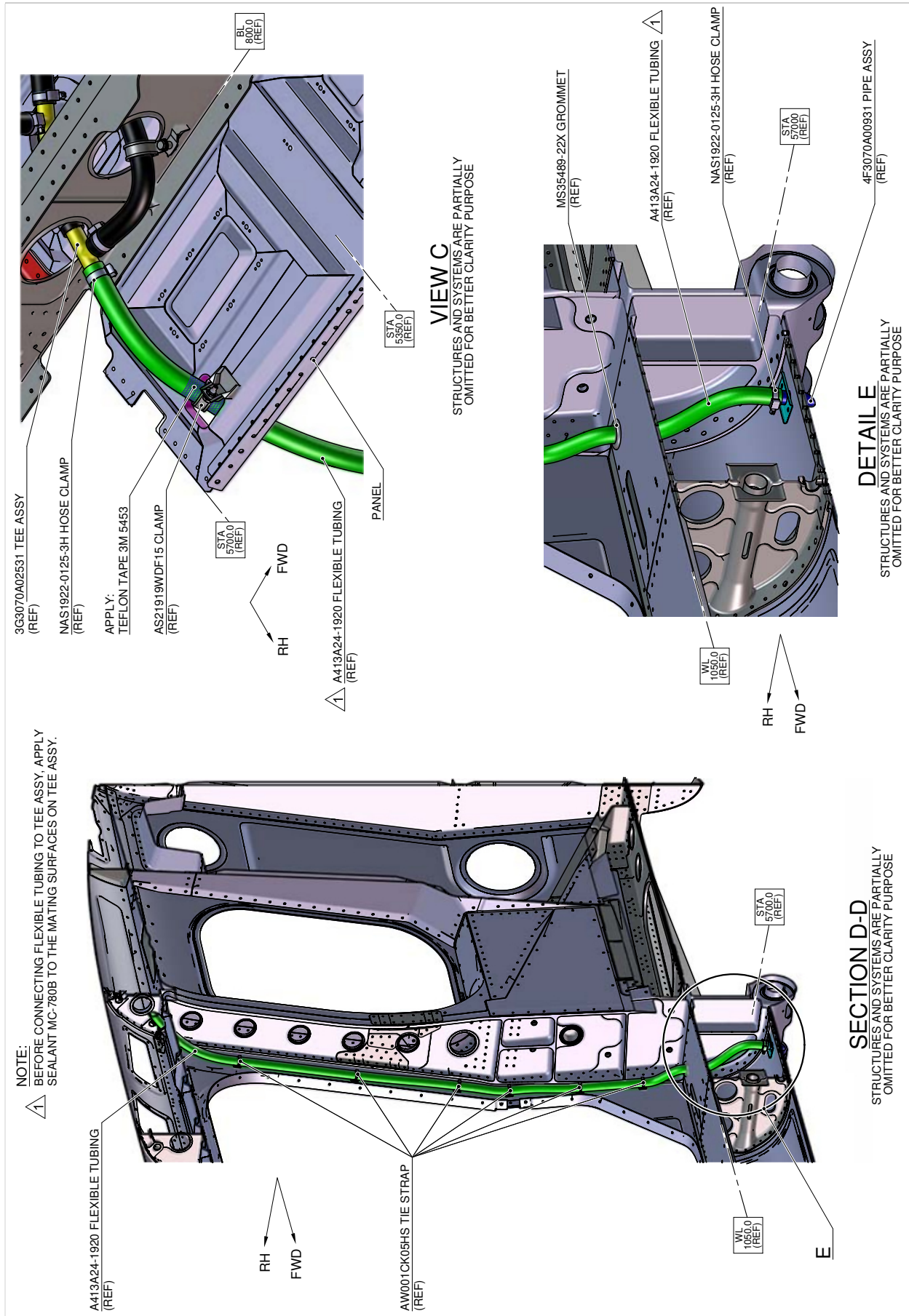


Figure 4

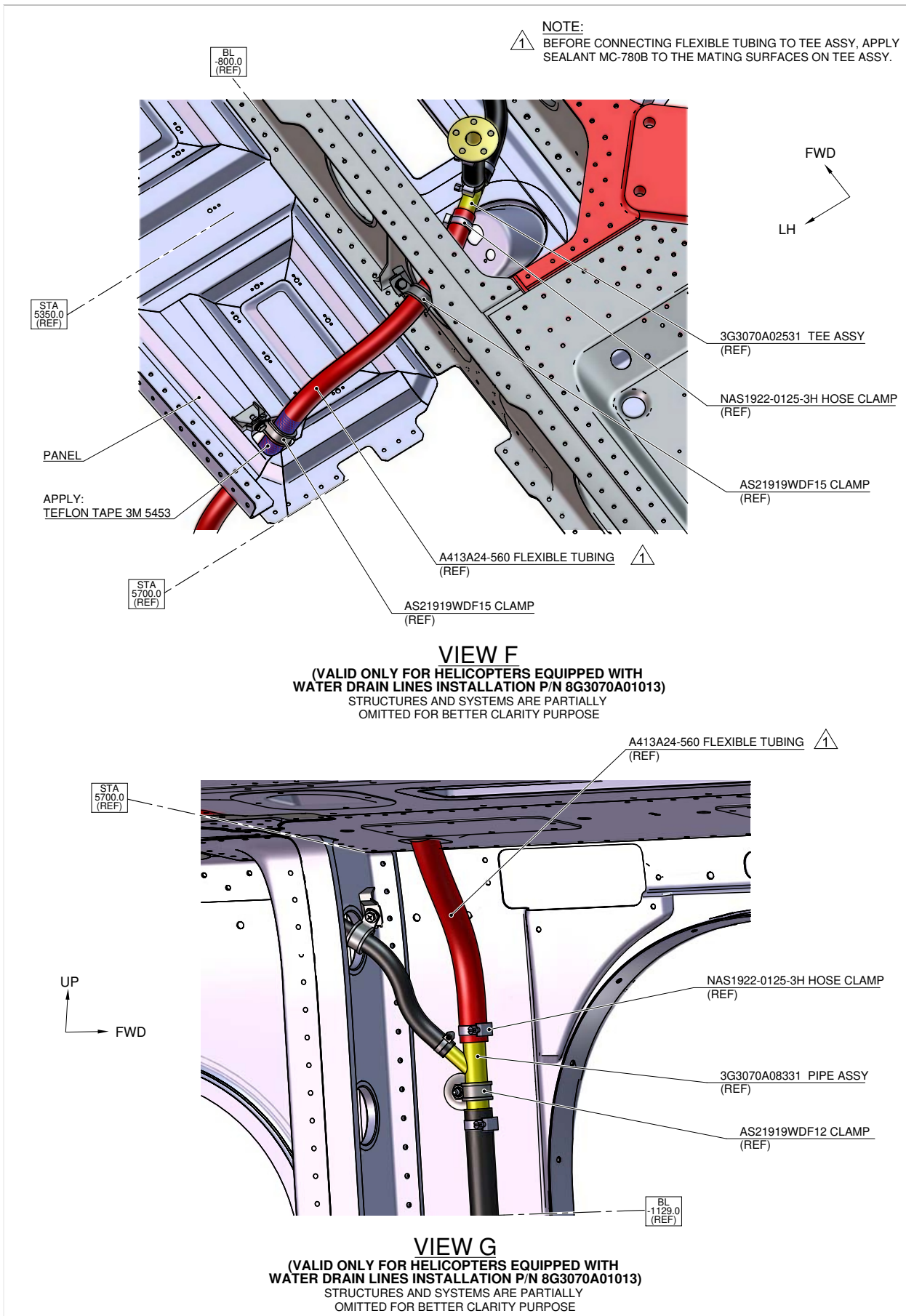


Figure 5

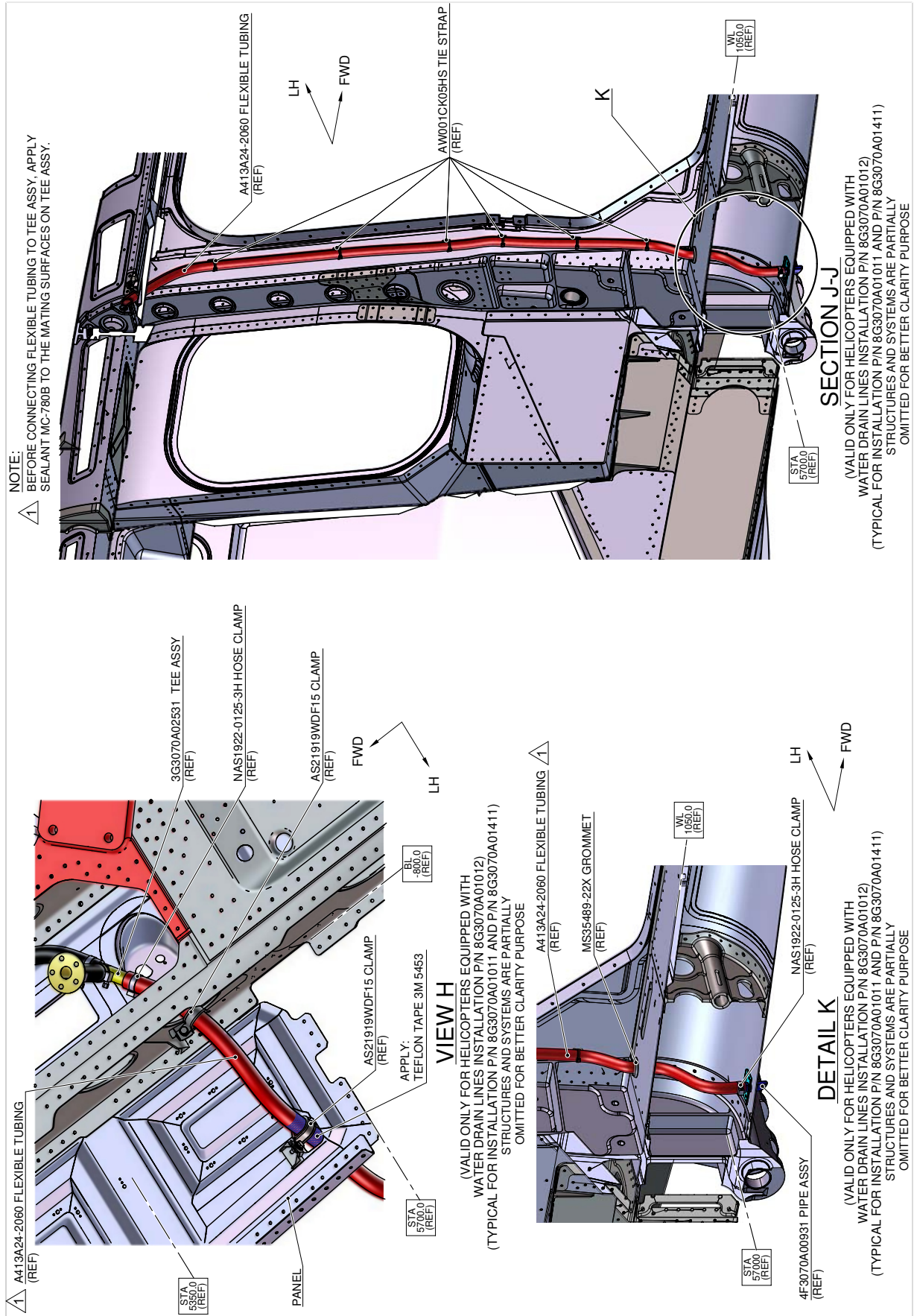


Figure 6

