

**SUPPLEMENT S09
TO THE AIRPLANE FLIGHT MANUAL
DA 42 NG**

Transportation of Radio Pharmaceuticals

Doc. No. : 7.01.15-E

Date of Issue : 13-Aug-2014

Design Change Advisories : OÄM 42-261

This Supplement to the Airplane Flight Manual has been approved under Approval Number 10050559.



Intentionally left blank.

0.1 RECORD OF REVISIONS

Rev. No.	Reason	Chapter	Page(s)	Date of Revision	Approval No.	Verification	Date Inserted	Signature

0.2 LIST OF EFFECTIVE PAGES

Chapter	Page	Date
0	9-S09-1	13 Aug 2014
	9-S09-2	13 Aug 2014
	9-S09-3	13 Aug 2014
	9-S09-4	13 Aug 2014
	9-S09-5	13 Aug 2014
1	9-S09-6	13 Aug 2014
	9-S09-7	13 Aug 2014
2	EASA approved 9-S09-8	13 Aug 2014
	EASA approved 9-S09-9	13 Aug 2014
3	9-S09-10	13 Aug 2014
4A, 4B, 5	9-S09-11	13 Aug 2014
6	9-S09-12	13 Aug 2014
7	9-S09-13	13 Aug 2014
	9-S09-14	13 Aug 2014
	9-S09-15	13 Aug 2014
	9-S09-16	13 Aug 2014
	9-S09-17	13 Aug 2014
	9-S09-18	13 Aug 2014
	9-S09-19	13 Aug 2014
8	9-S09-20	13 Aug 2014

Page 9-S09-4	Rev. 0 13-Aug-2014	Doc. # 7.01.15-E
--------------	--------------------	------------------

0.3 TABLE OF CONTENTS

	Page
1. GENERAL	9-S09-6
2. OPERATING LIMITATIONS	9-S09-8
3. EMERGENCY PROCEDURES	9-S09-10
4A. NORMAL OPERATING PROCEDURES	9-S09-11
4B. ABNORMAL OPERATING PROCEDURES	9-S09-11
5. PERFORMANCE	9-S09-11
6. MASS AND BALANCE	9-S09-12
7. SYSTEM DESCRIPTION	9-S09-13
8. AIRPLANE HANDLING, CARE AND MAINTENANCE	9-S09-20

1. GENERAL

1.1 INTRODUCTION

The DA 42 NG with OÄM 42-261 can be used for the transportation of radio pharmaceuticals stowed in special containers. The rear seats are replaced by a loading platform. A special baggage extension for radio pharmaceuticals and a flight deck partition are installed.

The transportation of this kind of goods in general is regulated by standards published by the International Atomic Energy Agency (IAEA) and by national regulations.

The transportation in the air is regulated by ICAO Annex 18, The Safe Transportation of Dangerous Goods by Air and by national regulations. Some countries require special operator's approvals for transportation of dangerous goods.

The distance between the containers and the occupants of the airplane is important to protect the occupants from dangerous radioactive doses.

Minimum distances from the surface of the package with the radioactive material and the nearest inside surface of flight deck partitions are specified in ICAO Doc. 9284.

The DA 42 NG with OÄM 42-261 installed is airworthiness approved for the transportation of radio pharmaceuticals in accordance with the above mentioned regulations. Additional operational approvals granted by the competent national authority are the responsibility of the operator.

1.5 DEFINITIONS AND ABBREVIATIONS

ICAO: International Civil Aviation Organisation

IAEA: International Atomic Energy Agency

TI: Transport Index

2. OPERATING LIMITATIONS

2.7 MASS (WEIGHT)

	Mass (Weight)	
Loading platform	No load allowed in flight	
Max. load in baggage extension for radio pharmaceuticals	80 kg	176 lb

CAUTION

The load has to be distributed into containers (see Chapter 7.15) with a max. mass (weight) of 20 kg (44 lbs) each. No additional load (baggage or other items) are allowed.

CAUTION

The containers have to be lashed with straps according to Chapter 7.15.

NOTE

The rear seats including the cabin baggage compartment (behind rear seats) are replaced by the loading platform.

NOTE

One person is allowed to step on the loading platform in order to manipulate the containers when the airplane is on the ground.

2.12 FLIGHT CREW

Maximum number of occupants: 2 (two persons)

NOTE

The rear seats including the cabin baggage compartment (behind rear seats) are replaced by the loading platform. Passenger transportation on the loading platform is prohibited.

2.15 LIMITATION PLACARDS

In the Baggage Extension:

MAX. LOADING 80 kg (176 lb)

**CARGO HAS TO BE SECURED
ACCORDING TO AFM**

CAUTION: OBSERVE WEIGHT AND BALANCE LIMITATIONS
SEE AIRPLANE FLIGHT MANUAL

3. EMERGENCY PROCEDURES

3.11 SMOKE AND FIRE

3.11.6 FIRE IN THE REAR BAGGAGE COMPARTMENT

1. Prepare hand fire extinguisher
2. Open sliding window in the flight deck wall
3. Extinguish fire with the fire extinguisher
4. Close sliding window in the flight deck wall
5. Land on the next suitable airfield

4A. NORMAL OPERATING PROCEDURES

No change.

4B. ABNORMAL OPERATING PROCEDURES

No change.

5. PERFORMANCE

No change.

6. MASS AND BALANCE

6.4.1 MOMENT ARMS

Containers in the Baggage Extension for Transportation of Radio Pharmaceuticals:

Item	Lever Arm		Container Arrangement ¹ (⇔ DOF)	
	[m]	[in]		
Radio Pharmaceu- tics Containers	If OÄM 42-261 is carried out:			
	Station 1	4.55	179.1	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Station 2	4.19	165.0	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
	Station 3A	3.98	156.7	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Station 3B	3.86	152.0	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

1)

- Container at station
- Container required at different station
- Optional container at different station

7. SYSTEM DESCRIPTION

7.15 BAGGAGE EXTENSION FOR RADIO PHARMACEUTICALS

For the transportation of radio pharmaceuticals the airplane is equipped with a baggage extension specially designed for the transportation of up to four special containers with an external dimension of 0.33 m x 0.33 m x 0.40 m and a maximum mass (weight) of 20 kg per container.

CAUTION

Use only polyethylene single lid containers AL1010 09 05 from PELICAN – HARDIGG or equivalent.

CAUTION

The containers must be securely lashed with straps as shown in the following Figures. For containers at stations 1 and 2, use straps according to EN 12195-2 PES, single part with small ratchet, min. 2000 daN (e.g. Part Number ZGR-50-2000-1) and for containers at stations 3A and 3B use straps according to EN 12195-2 PES, 2 parts with S-hooks, min. 500 daN (e.g. Part Number ZGR-25-0500-2-SPH) .

Distance from the surface of the container to the flight deck partition and corresponding maximum values of Transport Index TI according to ICAO Annex 18.

Station	Distance [in]	TI
1	1.65	10.0
2	1.32	7.0
3A	1.07	5.0
3B	0.97	4.0

NOTE

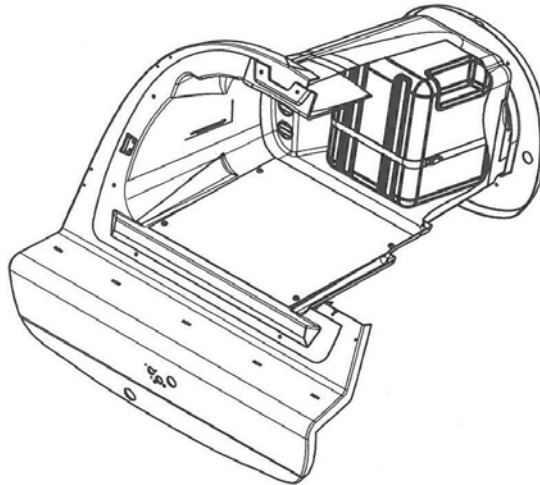
The definition of TI is published by IAEA or by national regulation for the transportation of dangerous goods

WARNING

Exceeding the above values of TI may harm the occupant's health!

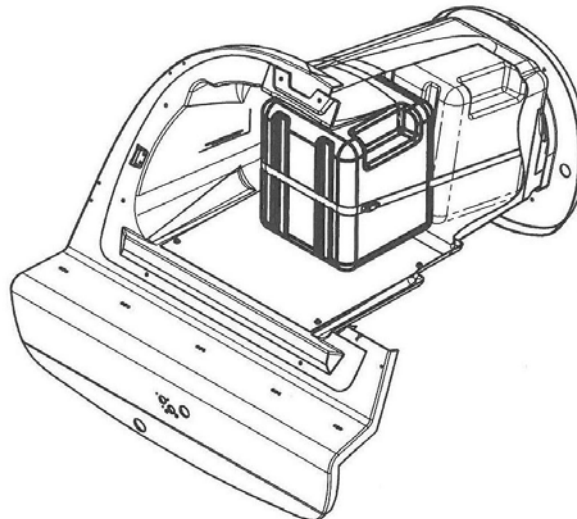
7.15.1 1 SINGLE CONTAINER AT STATION 1

The container is stowed at the rearmost position and secured with a single strap.



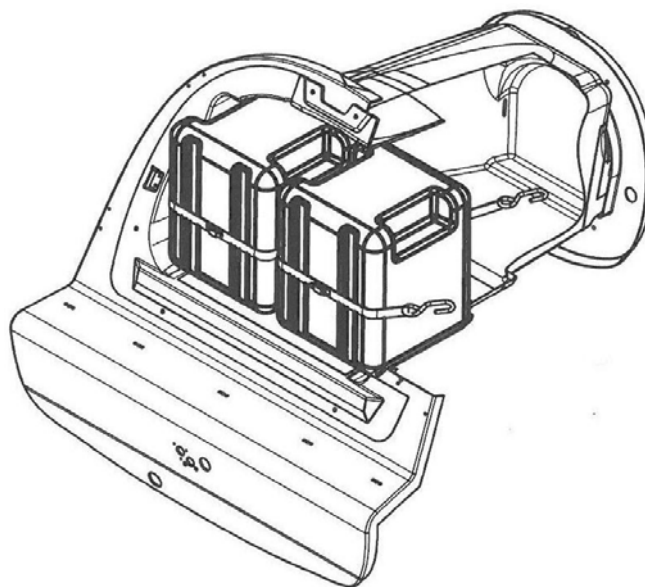
7.15.2 TWO CONTAINERS, ONE AT STATION 1 AND ONE AT STATION 2

The two containers are stowed one directly behind the other and both are secured with a single strap.



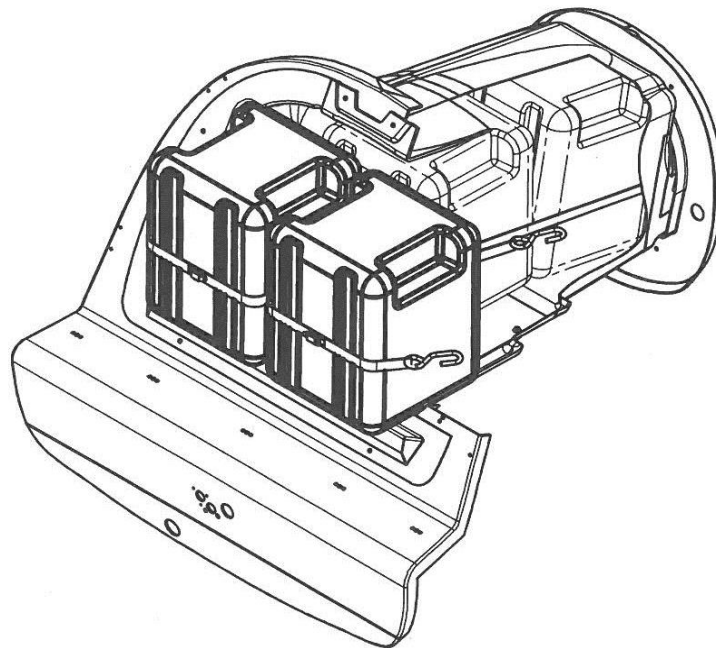
7.15.3 ONE OR TWO CONTAINERS AT STATION 3A

1 or 2 containers can be stowed at station 3A, as each container is secured with it's own single strap. Optionally, it is possible to stow and secure a single container at Station 1 in this configuration (refer to 7.15.1).



7.15.1 ONE OR TWO CONTAINERS AT STATION 3B (TOTAL OF FOUR CONTAINERS)

One or two containers can be stowed at station 3B, as each container is secured with its own single strap. To do so, two containers, one at station 1 and one on station 2 must be stowed and secured.



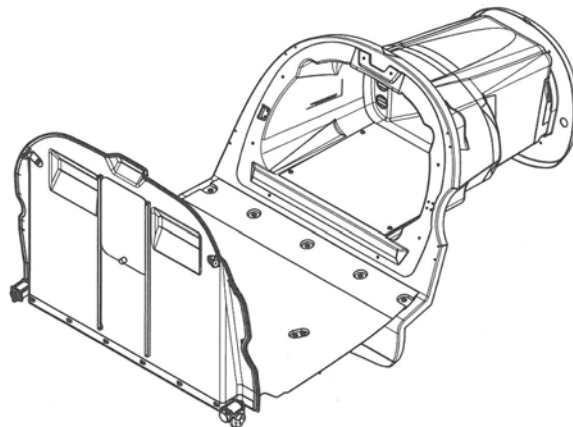
7.16 FLIGHT DECK PARTITION

The airplane used for transportation of radiopharmaceuticals is equipped with a flight deck partition which separated the flight deck from the cargo compartment.

The partition has a sliding window which allows supervision of the cargo during flight.

CAUTION

The flight deck partition has no structural separation function, thus it will not prevent that loose items enter the pilot compartment in case of a crash landing. The containers must be securely lashed with straps according to Chapter 7.15 in flight at all times.



7.17 LOADING PLATFORM

The airplanes used for the transportation of radio pharmaceuticals are equipped with a loading platform. The platform is suitable for one person to step on and putting down of the containers prior storing and lashing the containers in the radio pharmaceutical compartment.

8. AIRPLANE HANDLING, CARE AND MAINTENANCE

In addition to the DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, latest effective revision, maintenance instructions specific to the loading platform, flight deck partition and the baggage extension for radio pharmaceuticals are contained in the Airplane Maintenance Supplement S09, Doc. No. 7.02.15-S09, latest effective revision.

Make sure that the airplane is free of radioactive contamination. Periodically check the level of contamination in accordance with ICAO Annex 18 and national regulations. For removal of contamination refer to ICAO Annex 18 and national regulations.