

AIRBUS HELICOPTERS CANADA LIMITED
SUBJECT:

Required maintenance for the Cargo Pod Installation (P/N 355-200814/24).

APPLICABILITY :

 Aircraft with the subject modification embodied in accordance with TCCA STC
 No. SH97-60 or any relevant foreign approvals.

THE INFORMATION CONTAINED IN THIS DOCUMENT SHALL BE TREATED AS THE PROPERTY OF AIRBUS HELICOPTERS CANADA LIMITED (AHCA). THE RECIPIENT OF THIS DOCUMENT SHALL NOT DISCLOSE ANY INFORMATION CONTAINED HEREIN TO THIRD PARTIES WITHOUT THE WRITTEN PERMISSION OF AHCA, AND SHALL NOT USE OR REPRODUCE THIS DOCUMENT IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ITS ORIGINALLY INTENDED PURPOSE, OR TO EVALUATE ITS CONTENTS.

	NAME AND SIGNATURE	DATE	COMPANY DEPARTMENT
PREPARED BY:	D. Kerr <i>DKerr</i>	5 Dec., 2014	AHCA ENGINEERING
PREPARED BY:			
CHECKED BY:	C. Timmins <i>C. Timmins</i>	5 th Dec, 2014	AHCA ENGINEERING
CHECKED BY:	M. Merritt <i>Don Merritt</i> <i>FOR Mike</i>	DEC 05 2014	AHCA QUALITY ASSURANCE
Rev. 0 ACCEPTED (Civil A/W Authority)	(As per ICA Compliance Check Sheet) <i>C. Timmins</i>	10 th Dec, 2014	TCCA
Rev. 0 RELEASED BY:	P. Sharpe <i>PSharpe</i>	11 Dec 2014	AHCA ENGINEERING

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
1	GENERAL	5
2	AIRWORTHINESS LIMITATIONS	13
3	CONTROL AND OPERATION	14
4	INSPECTION SCHEDULE AND MAINTENANCE ACTION	14
5	REPLACEMENT COMPONENTS AND REPAIR/OVERHAUL INFORMATION ..	16
6	TROUBLESHOOTING	16
7	SPECIAL TOOLING	20
8	REMOVAL AND REPLACEMENT	20
9	WEIGHT AND BALANCE	22
10	PLACARDS AND MARKINGS	23

TABLE OF FIGURES

FIGURE	TITLE	PAGE
1	General Layout	5
2	Left Hand Cargo Pod Door Assembly	6
3	Door Latch Assembly	7
4	Door Switch Assembly	8
5	Forward and Rear Fuel Fillers	9
6	Right Hand Cargo Pod EPU Door	10
7	Cargo Pods Installation, Wiring Diagram	17
8	LH and RH Microswitch Wire Routing, Wiring Diagram	19
9	Markings located on LH cargo pod	23
10	Placard located on inside of LH cargo pod door	24
11	Markings located on RH cargo pod	25
12	Placard located on inside of RH cargo pod door	26

Transport Canada - Accepted



AIRBUS HELICOPTERS CANADA LIMITED

INSTRUCTIONS FOR CONTINUED
AIRWORTHINESS
CARGO PODS LH/RH INSTALLATION
AS 355

TABLES

TABLE	TITLE	PAGE
1	Inspection Schedule and Maintenance Action Every 150 FH or 12 M (Margin: 15 FH or 36 D)	14
2	Troubleshooting	16

Transport Canada - Accepted

1. GENERAL

- A. The subject Cargo Pods Installation comprises a LH, RH or both pods which provide an increase in cargo bay capacity. The forward opening door allows for easy cargo handling. The Cargo Pods also have a non-slip surface on the top and can support the weight of a person. Refer to Figure 1 for General Layout.

The cargo pods installation consists of the following main components:

- 1) Cargo Pod, LH complete, P/N 355-200814
- 2) Cargo Pod, RH complete, P/N 355-200824

A micro switch installation that is wired into the existing cockpit annunciation light caution system alerts the pilot that a door is not securely closed.

- B. These Instructions for Continued Airworthiness are applicable to aircraft with the subject modification embodied.

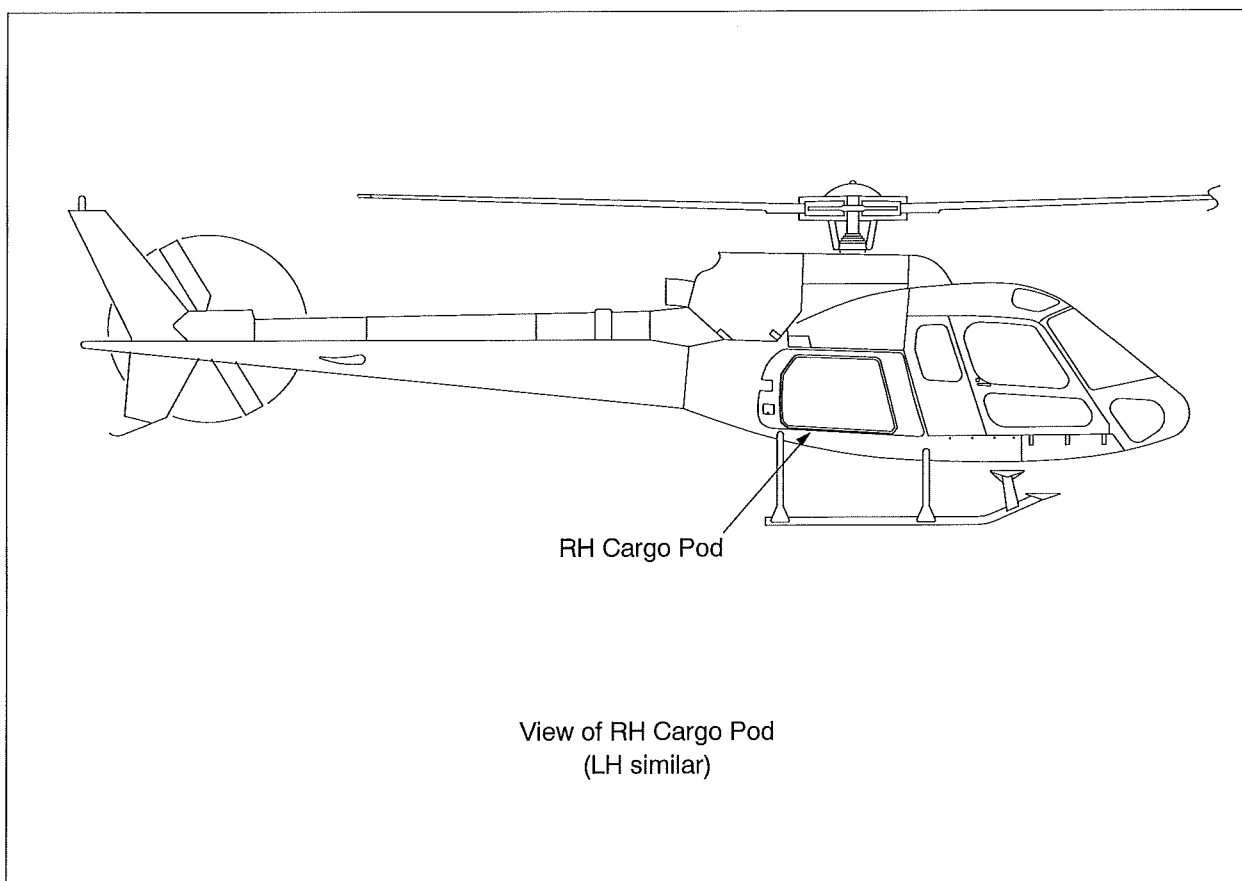


Figure 1 General Layout

Transport Canada - Accepted

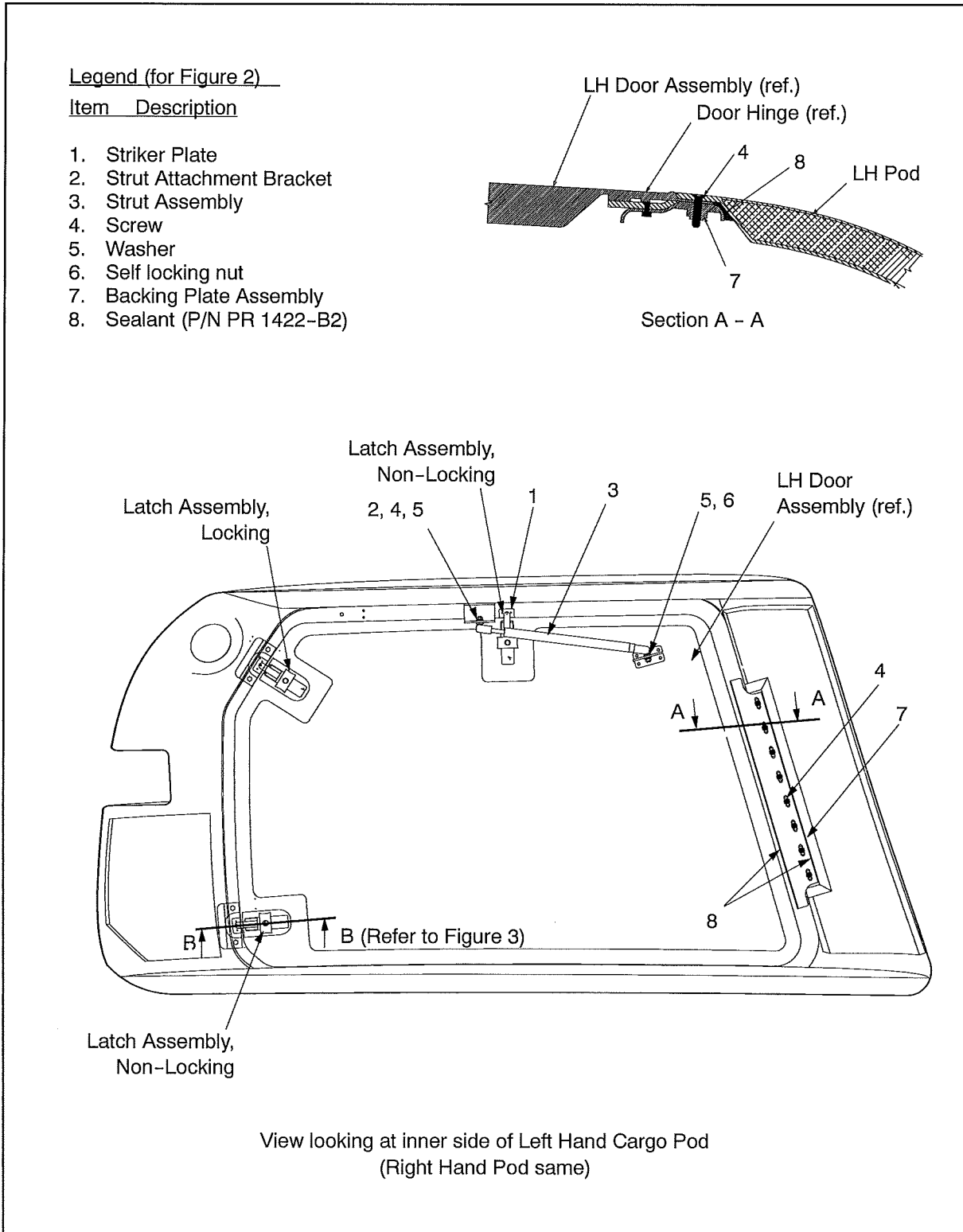


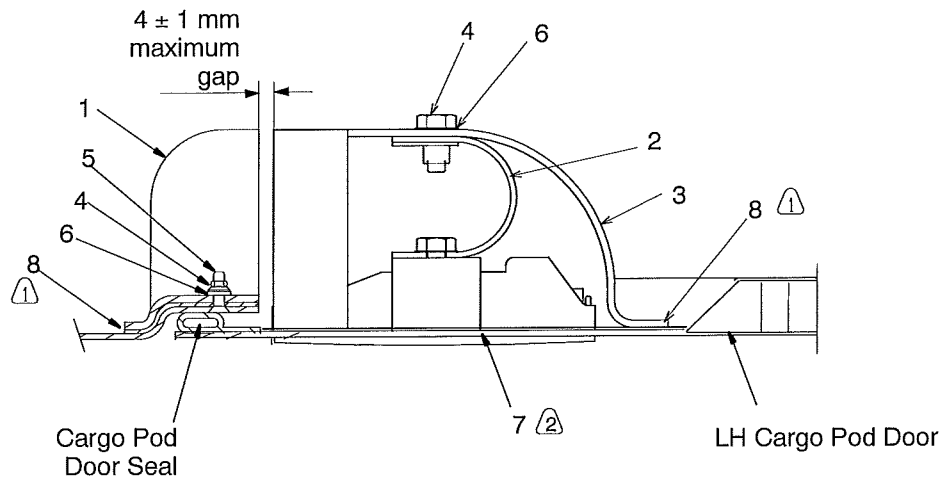
Figure 2 Left Hand Cargo Pod Door Assembly

Transport Canada - Accepted

Legend (for Figure 3)

Item Description

1. Fixed Cover
2. Clamp Assembly
3. Mobile Cover
4. Screw
5. Self-Locking Nut
6. Washer
7. Latch Assembly
(non-locking or locking)
8. Sealant (P/N PR1422-B2)



SECTION B - B

Left Hand Door Latch Assembly shown, Typical 3 places
(2 places non-locking, 1 place locking)

Cargo Pod Door latch shown in closed position
(Right Hand door latch assembly same)

- ② Adjust the latch screw and jamnut to ensure even seal contact around perimeter of door and cargo pod flange.
- ① Apply sealant (8) between faying surfaces.

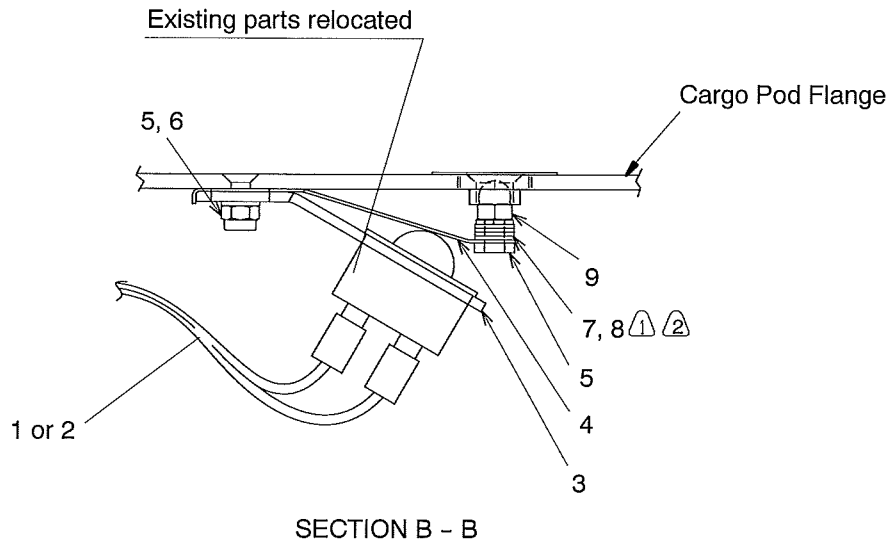
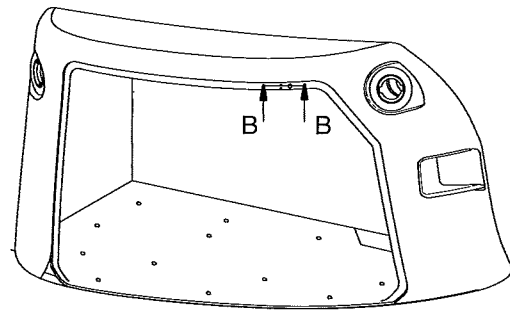
NOTES:

Figure 3 Door Latch Assembly

Transport Canada - Accepted

Legend (for Figure 4)
Item Description

1. LH Microswitch Extension
2. RH Microswitch Extension
3. Switch Support
4. Cargo Pod Spring
5. Screw
6. Nut
7. Washer
8. Lockwasher
9. Acorn Nut
10. Thread Locking Compound
(P/N Loctite 242)



- ② Apply thread locking compound (10) to threads once adjusted.
- ① Adjust microswitch assembly as required by adding or removing washers (7) to allow the instrument panel warning light to activate when door is open.

NOTES:

Figure 4 Door Switch Assembly

Transport Canada - Accepted

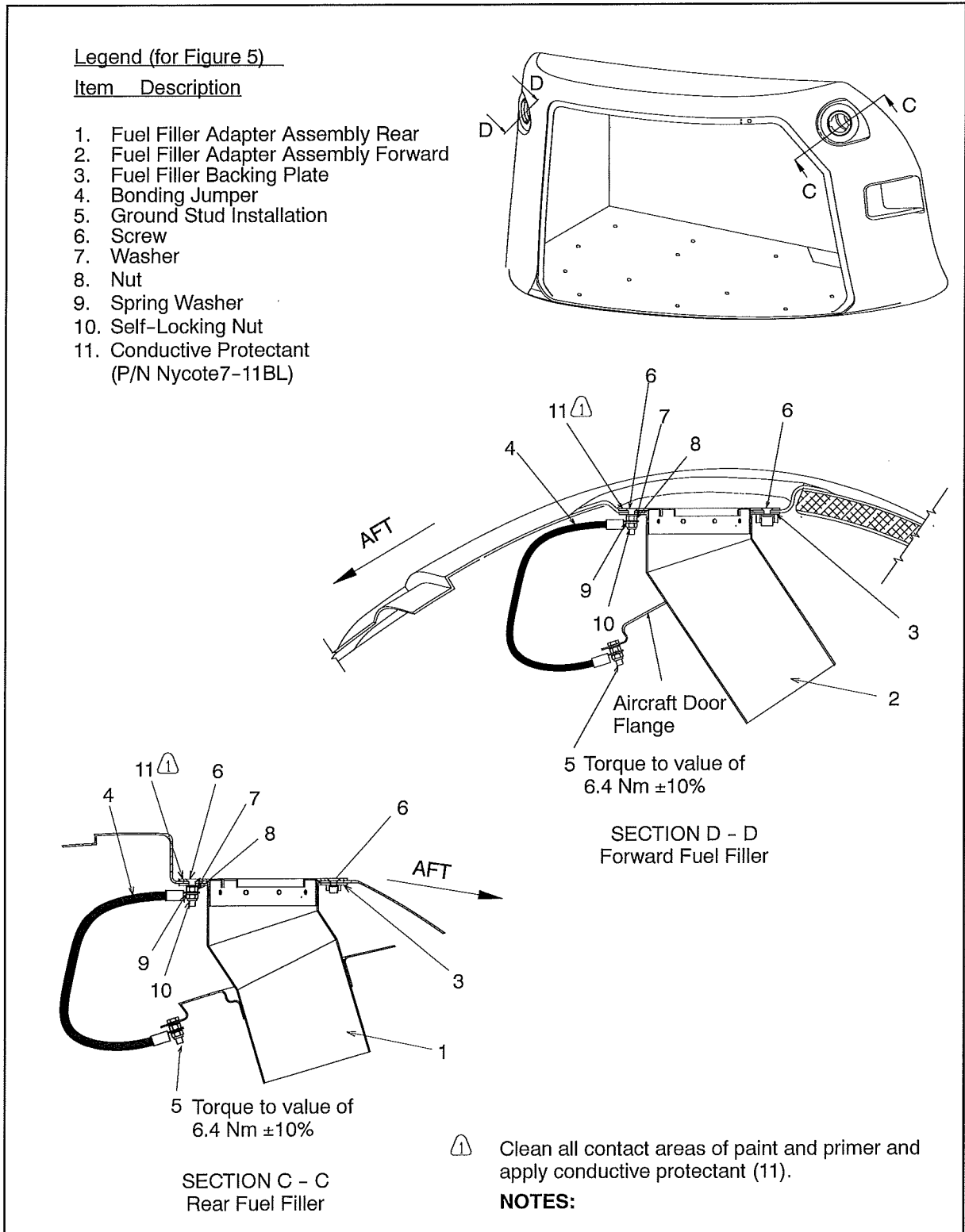


Figure 5 Forward and Rear Fuel Fillers

Transport Canada - Accepted

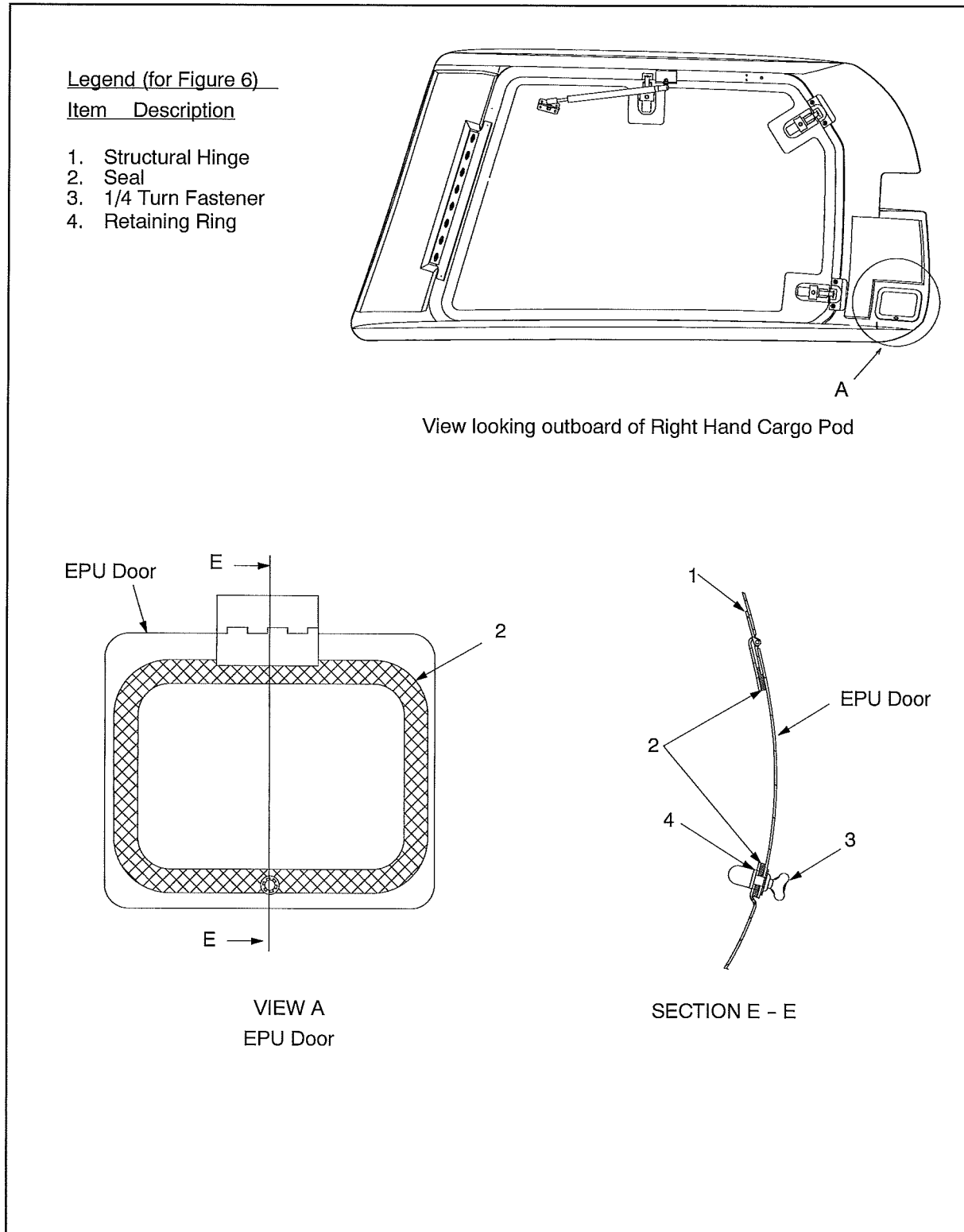


Figure 6 Right Hand Cargo Pod EPU Door

Transport Canada - Accepted

AIRBUS HELICOPTERS CANADA LIMITED
C. REFERENCES

DOCUMENT	DOCUMENT TITLE
MET	Maintenance Manual
MTC	Standard Practices Manual

D. ABBREVIATIONS & DEFINITIONS

ABBREVIATION	DEFINITION
Acc'd	Accepted
AH	Airbus Helicopters (France)
AHCA	Airbus Helicopters Canada Limited
App'd	Approved
A/W	Airworthiness
CAR	Canadian Airworthiness Regulations
D	Days
DAPM	Design Approval Procedures Manual
ELT	Emergency Locator Transmitter
EPU	External Power Unit
FAA	Federal Aviation Administration
FH	Flight Hours
FT	Feet
IMP	Imperial
KG	Kilogram
LH	Left Hand
M	Months
No.	Number
OEM	Original Equipment Manufacturer
P/N	Part Number
ref.	reference
Rev.	revision
RH	Right Hand
SQ	Square
STC	Supplemental Type Certificate
TCCA	Transport Canada Civil Authority
V.d.c.	Volts direct current
WD	Wiring Diagram

Transport Canada - Accepted

E. UNITS OF MEASUREMENT

ABBREVIATION / SYMBOL	UNIT OF MEASUREMENT
kg	kilogram
lb	pound
m	meter
mm	millimeters
in	inch
Nm	Newton Meters

Transport Canada - Accepted



AIRBUS HELICOPTERS CANADA LIMITED

**INSTRUCTIONS FOR CONTINUED
AIRWORTHINESS
CARGO PODS LH/RH INSTALLATION
AS 355**

2. AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is approved by the Minister and specifies maintenance required by any applicable airworthiness or operating rule unless an alternative program has been approved by the Minister.

The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §§43.16 and 91.403 of Federal Aviation Regulations unless an alternative program has been FAA approved.

The airworthiness limitations section is approved and variations must also be approved.

No airworthiness limitations associated with this installation.

Transport Canada – Approved

AIRBUS HELICOPTERS CANADA LIMITED
3. CONTROL AND OPERATION

Control and operation of the aircraft remains unchanged.

4. INSPECTION SCHEDULE AND MAINTENANCE ACTION
NOTE: Use torque per MTC, Chapter 20.02.05.404, unless otherwise specified.

4.1. INSPECTION SCHEDULE

4.1.1. Every 150 FH or 12 M (Margins: 15 FH or 36 D) to coincide with the 150 FH or 12 M helicopter inspection), whichever occurs first:

ITEM	INSPECTION OR MAINTENANCE WORK	CORRECTIVE ACTION
A	- Visually inspect LH and RH Cargo Pods Installation for: a. general condition	a. If cracking, delamination or debonding is found contact AHCA.
B	- Visually inspect sealant between left hand and right hand cargo pods and airframe for: a. deterioration	a. Clean area and reapply sealant, P/N PR1422 in accordance with MTC, Chapter 20.05.01.206.
C	- Visually inspect left hand and right hand strut assemblies, item 3 shown in Figure 2 for: a. secure installation	a. Ensure that the door strut assembly is connected correctly by holding the door in open position.
D	- Visually inspect sealant around backing plate assembly, item 7, shown in Figure 2 for: a. deterioration	a. Clean area and reapply sealant, P/N PR1422 B2 in accordance with MTC, Chapter 20.05.01.206.
E	- Check LH and RH door hinges, shown in Figure 2 for: a. security	a. Re-tighten screws (4) as required.
F	- Test LH and RH door latches, item 7, shown in Figure 3 for: a. freedom of movement b. proper latching	a. Clean and lubricate to restore freedom of movement. b. Adjust the latch screw and jam nut as required to ensure adequate seal between the Cargo Pod Door and the door seal.

Table 1 Inspection Schedule and Maintenance Action
 Every 150 FH or 12 M to coincide with the 150 FH or 12 M helicopter inspection, whichever occurs first
 (continued on following page)

Transport Canada - Accepted

AIRBUS HELICOPTERS CANADA LIMITED
4. INSPECTION SCHEDULE AND MAINTENANCE ACTION (continued)
4.1. INSPECTION SCHEDULE (continued)

4.1.1. Every 150 FH or 12 M (Margins: 15 FH or 36 D) to coincide with the 150 FH or 12 M helicopter inspection), whichever occurs first:

ITEM	INSPECTION OR MAINTENANCE WORK	CORRECTIVE ACTION
G	- Visually inspect door seal in Figure 3, for: a. condition	a. If cuts or cracks are evident contact AHCA for replacement seal (P/N 1.952N404).
H	- Check ground stud installation, item 5, shown in Figure 5 for: a. security	a. Secure as required. Torque to value of 6.4 Nm \pm 10%.
I	- Visually inspect bonding jumper, item 4, shown in Figure 5 for: a. security b. cracking and kinking	a. Re-tighten as required. b. No cracking is allowed. If kinking is found, adjust as required. Contact AHCA for replacement parts if cracking found.
J	- Check the Fuel Filler Adapter Assembly both Forward and Rear, items 1 and 2, shown in Figure 5 for: a. security	a. Re-tighten as required.
K	- Visually inspect seal, item 2, between right hand cargo pod and EPU door in Figure 6 for: a. condition	a. If cuts and cracks are evident, replace seal (P/N SC41-722-12).
L	- Visually inspect placards and markings (refer to Section 10, Figures 9, 10, 11 & 12) for: a. legibility b. secure mounting	a. If placards have become illegible, contact AHCA for replacement parts. b. Secure, reattach placards as required.

Table 1 Inspection Schedule and Maintenance Action
 Every 150 FH or 12 M to coincide with the 150 FH or 12 M helicopter inspection, whichever occurs first

Transport Canada - Accepted

AIRBUS HELICOPTERS CANADA LIMITED
5. REPLACEMENT COMPONENTS AND REPAIR / OVERHAUL INFORMATION

Contact AHCA for replacement parts. No overhaul information required for this installation.

For replacement components or repair information contact:

Airbus Helicopters Canada Limited
 1100 Gilmore Road, P.O. Box 250
 Fort Erie, Ontario L2A 5M9 Canada
 Telephone: (905) 871-7772
 Telefax: (905) 871-3599
 www.airbushelicopters.ca

6. TROUBLESHOOTING

For electrical system troubleshooting refer to Figure 7 Cargo Pods Installation, Wiring Diagram and Figure 8 LH and RH Microswitch Wire Routing, Wiring Diagram.

No.	Trouble Symptom	Probable Cause	Corrective Action
1	Door open warning lamp does not illuminate when cargo door is open.	Failure with Cargo Pod door indicating system	Perform electrical checks - Cargo Door in accordance with MET, Chapter 52.30.00, 601.
		Failure in Warning/ Caution Panel	Perform electrical checks - Cargo Door in accordance with MET, Chapter 52.30.00, 601.
		Faulty switch	Replace switch, make adjustments as per Figure 4, NOTES 1 and 2. Test in accordance with MET, Chapter 52.30.00, 601.

Table 2 Troubleshooting Guide

Transport Canada - Accepted

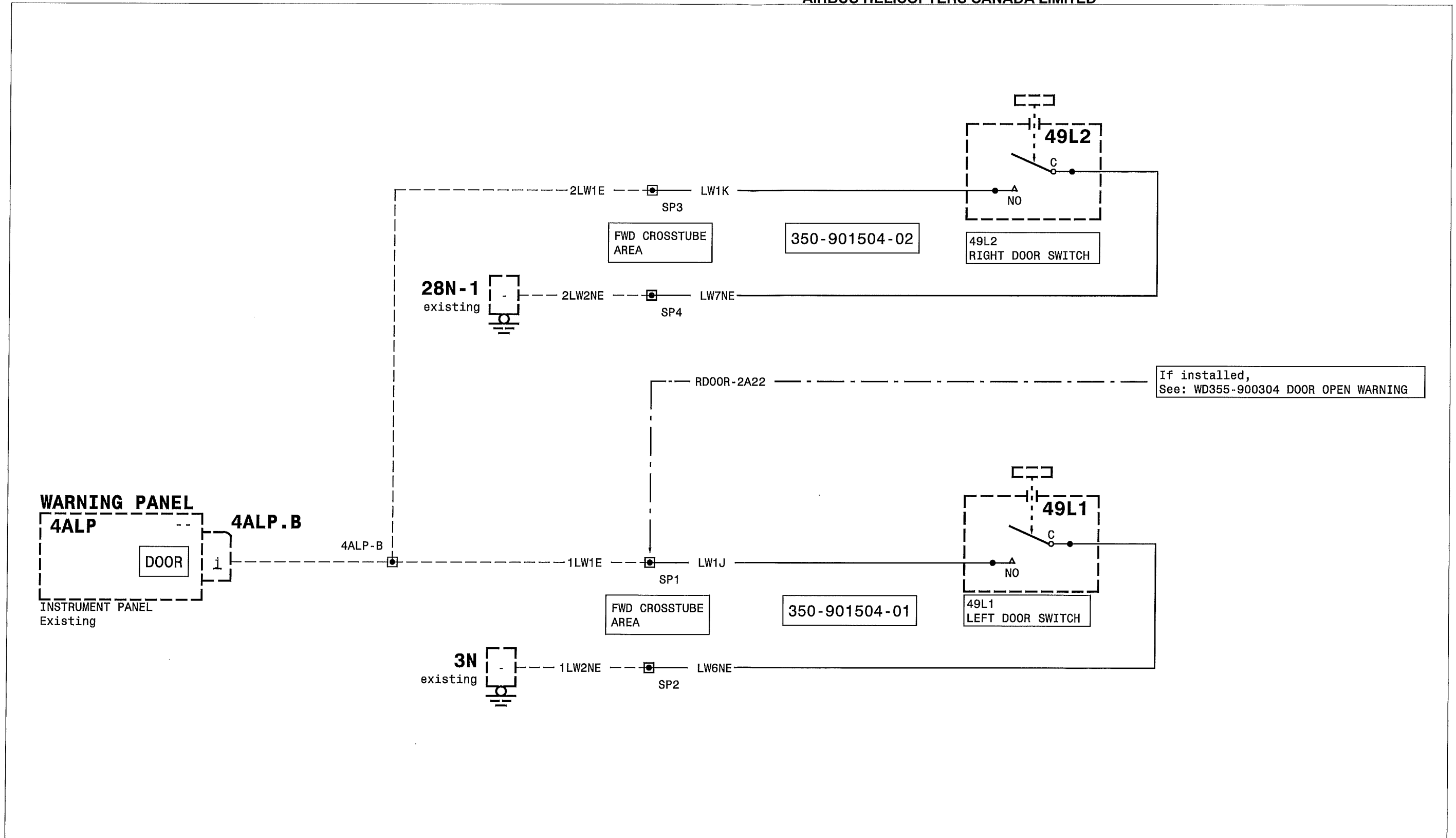


Figure 7 Cargo Pods Installation, Wiring Diagram



AIRBUS HELICOPTERS CANADA LIMITED

INSTRUCTIONS FOR CONTINUED
AIRWORTHINESS
CARGO PODS LH/RH INSTALLATION
AS 355

Page left blank intentionally

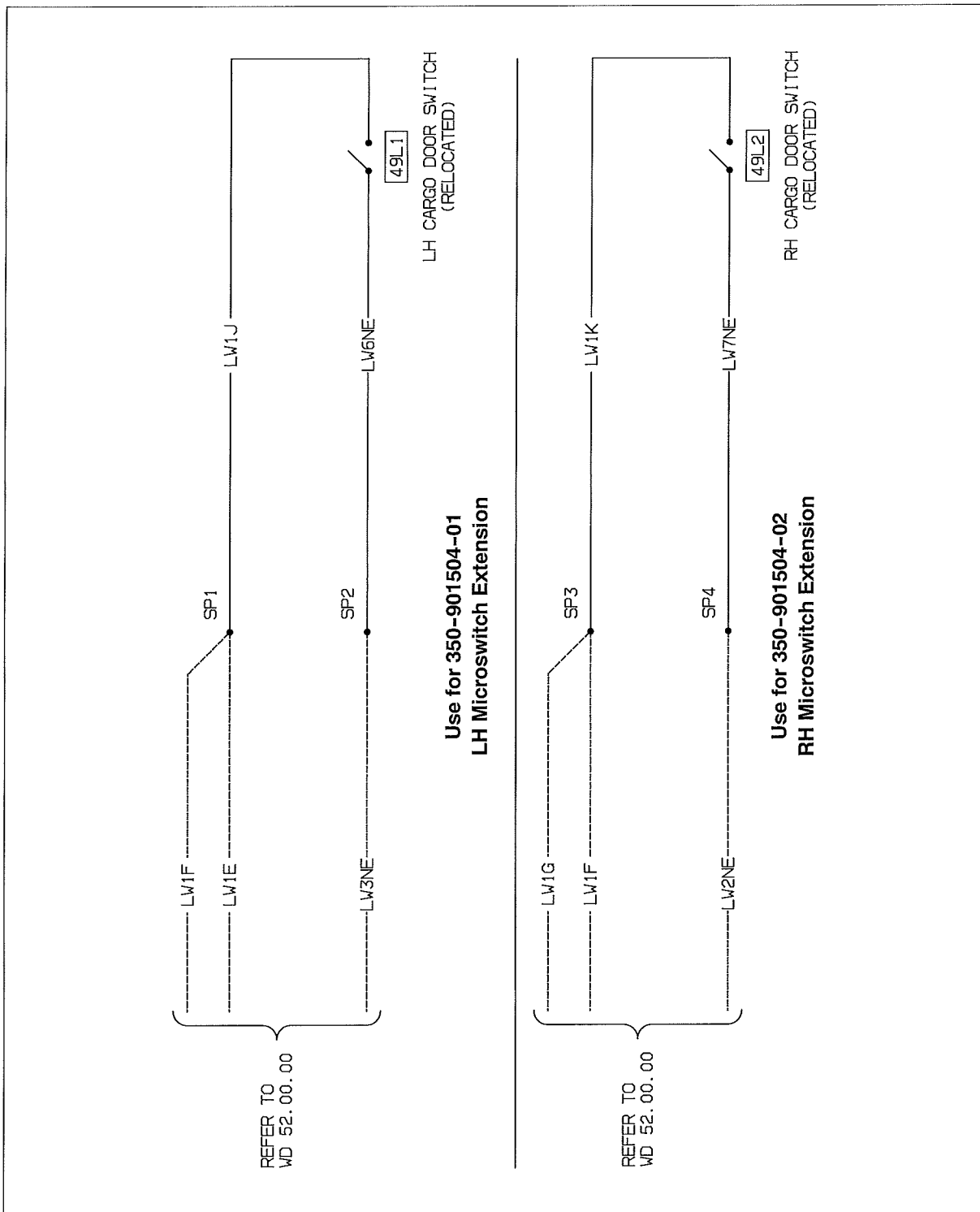


Figure 8 LH and RH Microswitch Wire Routing, Wiring Diagram

Transport Canada - Accepted

7. SPECIAL TOOLING

No special test equipment or tools are required. Standard tools are adequate.

8. REMOVAL AND REPLACEMENT

PRELIMINARIES

- Read and comply with Electrical Power Supply System Instructions AS 355 MET, Chapter 24.00.00.301.
- Disconnect the external power unit and battery in accordance with AS 355 MET, Chapter 24.00.00.301.
- Open any circuit breakers/fuses associated with the LH/RH Cargo Pods Installation.

A. REMOVAL

1. CARGO POD DOOR (Refer to Figure 2)
 - a) With the cargo pod door open, disconnect the strut assembly (3) from the strut attachment bracket (2). Refer to Figure 2.
 - b) Close and latch door. Remove screws (4, 8 places) from the door hinge.
 - c) Carefully open the door latches and lift out door.
2. DOOR LATCH ASSEMBLIES (Non-Locking or Locking, Refer to Figure 3)
 - a) With the cargo pod door open (or on a work bench) position the door latch assemblies (7) in the unlatched position.
 - b) Remove sealant from around latch.
 - c) Remove screw (4) and washer (6) and remove mobile cover (13).
 - d) Remove the bolt securing clamp assembly (2) and remove latch assembly (7).
3. CARGO POD DOOR SWITCH (Refer to Figure 4)
 - a) The cargo pod door must be in the open position.
 - b) Remove screw (5) and nut (6) that secure switch support (3).
 - c) Remove the cargo pod door switch.

Transport Canada – Accepted

8. **REMOVAL AND REPLACEMENT** (continued)

B. REPLACEMENT

NOTE: Use torque per MTC, Chapter 20.02.05.404, unless otherwise specified.

References:

General Methods of Applying Sealing Compounds, refer to MTC, Chapter 20-05-01-102.

Application of PR 1422 Class B sealant, refer to MTC, Chapter 20-05-01-206.

1. CARGO POD DOOR (Refer to Figure 2)
 - a) Position the cargo pod door into the pod. Once correctly aligned secure the door hinge using screws (4, 8 places).
 - b) Close and latch cargo pod door.
 - c) Open door and secure strut assembly (3) to the strut attachment bracket (2).
 - d) Adjust the latch screw and jamnut to ensure even seal contact around the perimeter of the door and the cargo pod flange.
 2. DOOR LATCH ASSEMBLIES (Non-Locking and Locking, Refer to Figure 3)
 - a) With the cargo pod door open (or on a work bench), position door latch assemblies (7) (non-locking, 2 places and locking, 1 place) in the latch cutouts in cargo pod door assembly. Refer to Figure 2 for the locking latch assembly location.
 - b) Align latch assembly (7) and clamp assembly (2) and tighten bolt to secure the latch assembly in place.
 - c) Install mobile cover (3) and secure using screw (4) and washer (6).
- NOTE:** Apply sealant (8) between faying surfaces in accordance with General Application of sealing Compounds, refer to MTC, Chapter 20-05-01-102.
3. CARGO POD DOOR SWITCH (Refer to Figure 4)
 - a) Reposition the switch, the switch support (3) and realign the cargo pod spring (4). Secure using screw (5) and nut (6).
 4. Close all circuit breakers/fuses opened for service in the PRELIMINARIES paragraph of this section.
 5. Adjust microswitch as per Figure 4, NOTES 1 and 2.
 6. Perform functional tests in accordance with AS 355 MET, Chapter 24.30.00.501.
 7. Perform operational check of all systems that were serviced in accordance with the AS 355 MET Aircraft Maintenance Manual procedures and the system's installation/operation manual.
 8. Perform an electrical check - Cargo Door in accordance with MET, Chapter 52-30-00, 601.

Transport Canada - Accepted

9. **WEIGHT AND BALANCE DATA**

A. Removed Items

DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
OEM LH Cargo Door	-3.96	-8.7	-3.55	-139.8	-14.06	-1216.3
OEM RH Cargo Door	-3.96	-8.7	-3.54	-139.4	-14.06	-1212.8
Total	-7.92	-17.4	-3.55	-139.8	-28.12	-2432.5

B. Added Items

DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
RH Cargo Pod	19.74	43.5	3.55	139.8	70.08	6081.3
LH Cargo Pod	20.34	44.8	3.54	139.4	72.00	6245.1
Total	40.08	88.3	3.54	139.6	142.08	12326.4

Transport Canada - Accepted

10. PLACARDS AND MARKINGS

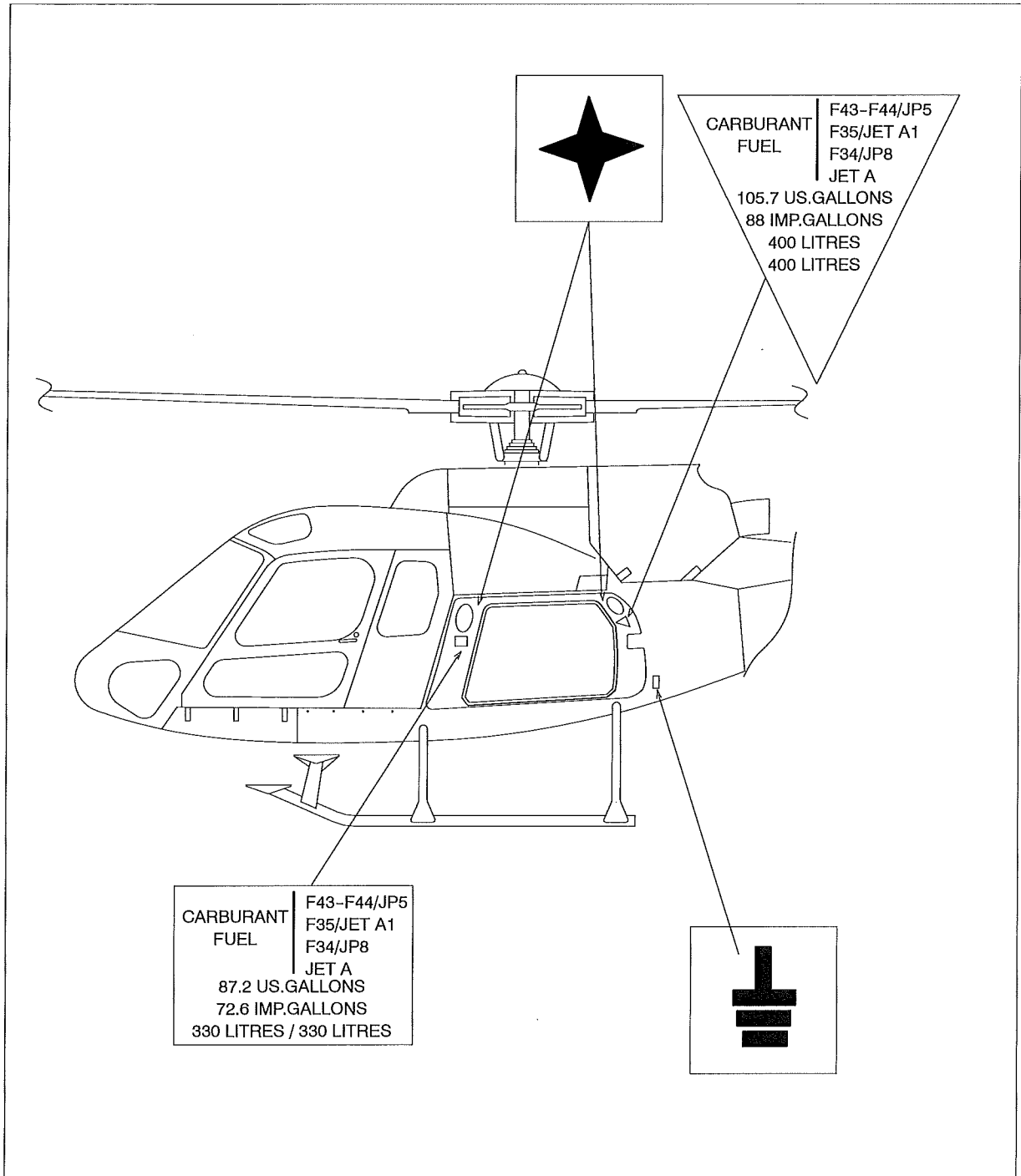


Figure 9 Markings located on LH cargo pod

Transport Canada - Accepted

10. PLACARDS AND MARKINGS (continued)

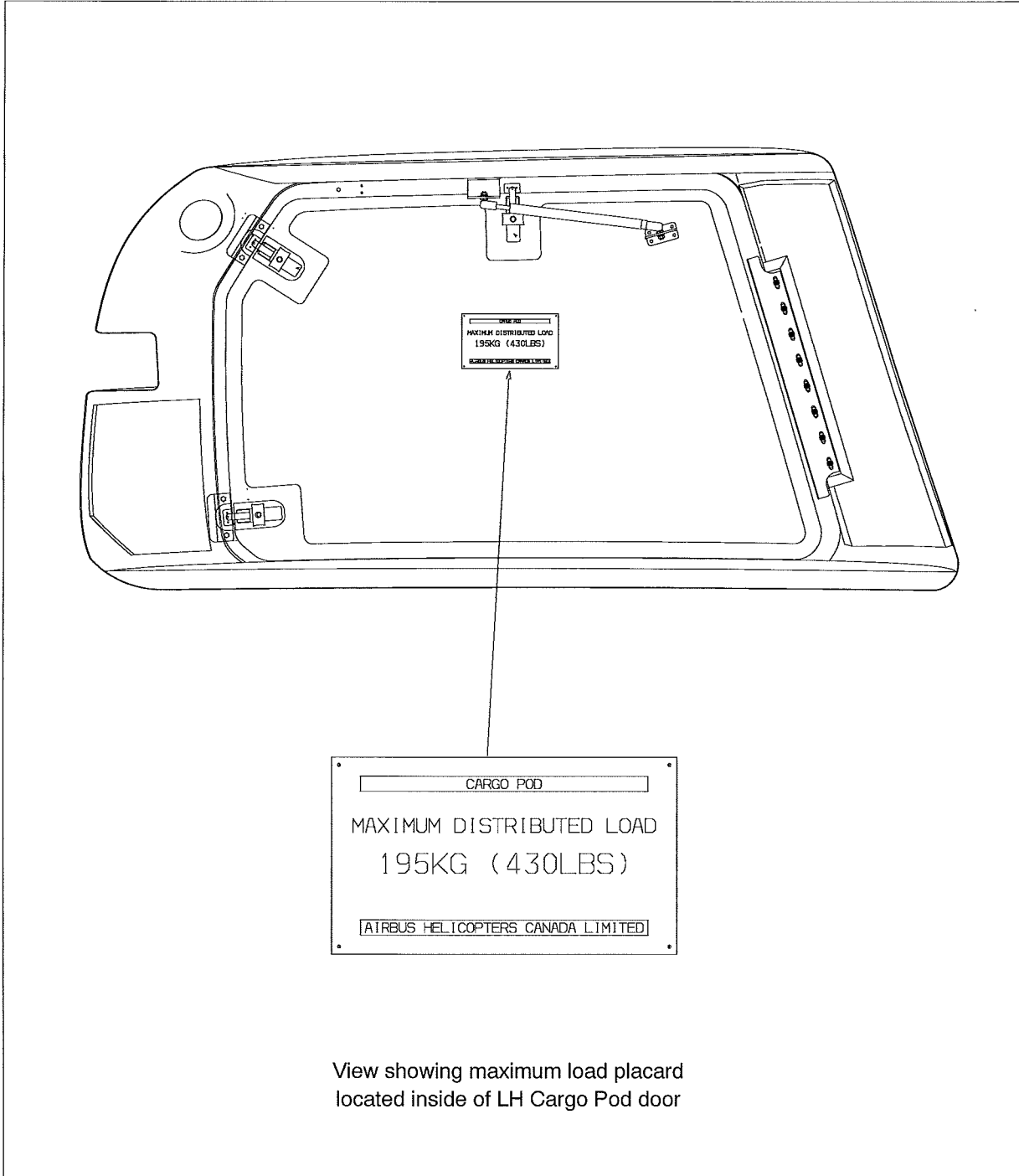


Figure 10 Placard located on inside of LH cargo pod door

Transport Canada - Accepted

10. PLACARDS AND MARKINGS (continued)

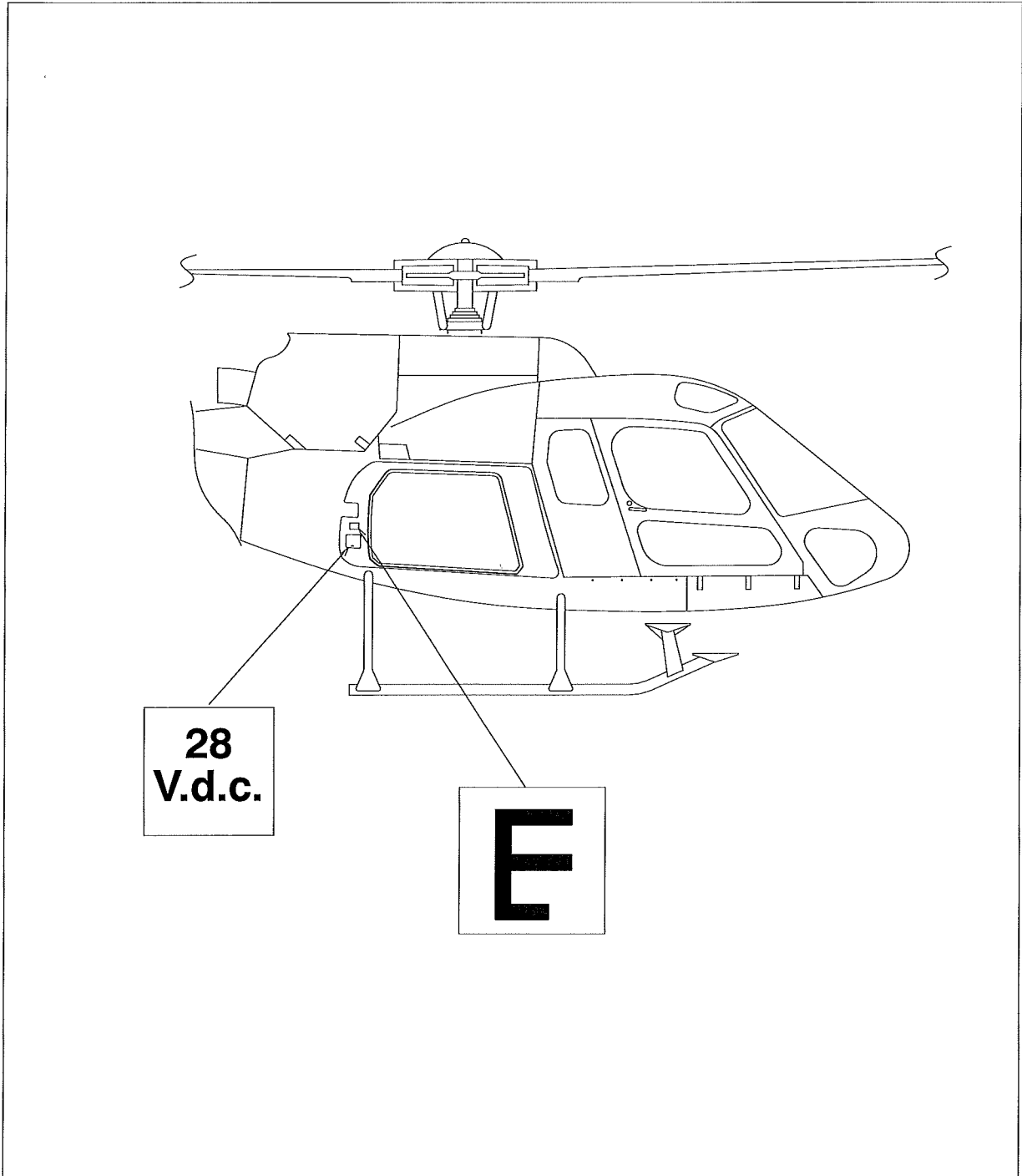


Figure 11 Markings located on RH cargo pod

Transport Canada - Accepted

10. PLACARDS AND MARKINGS (continued)

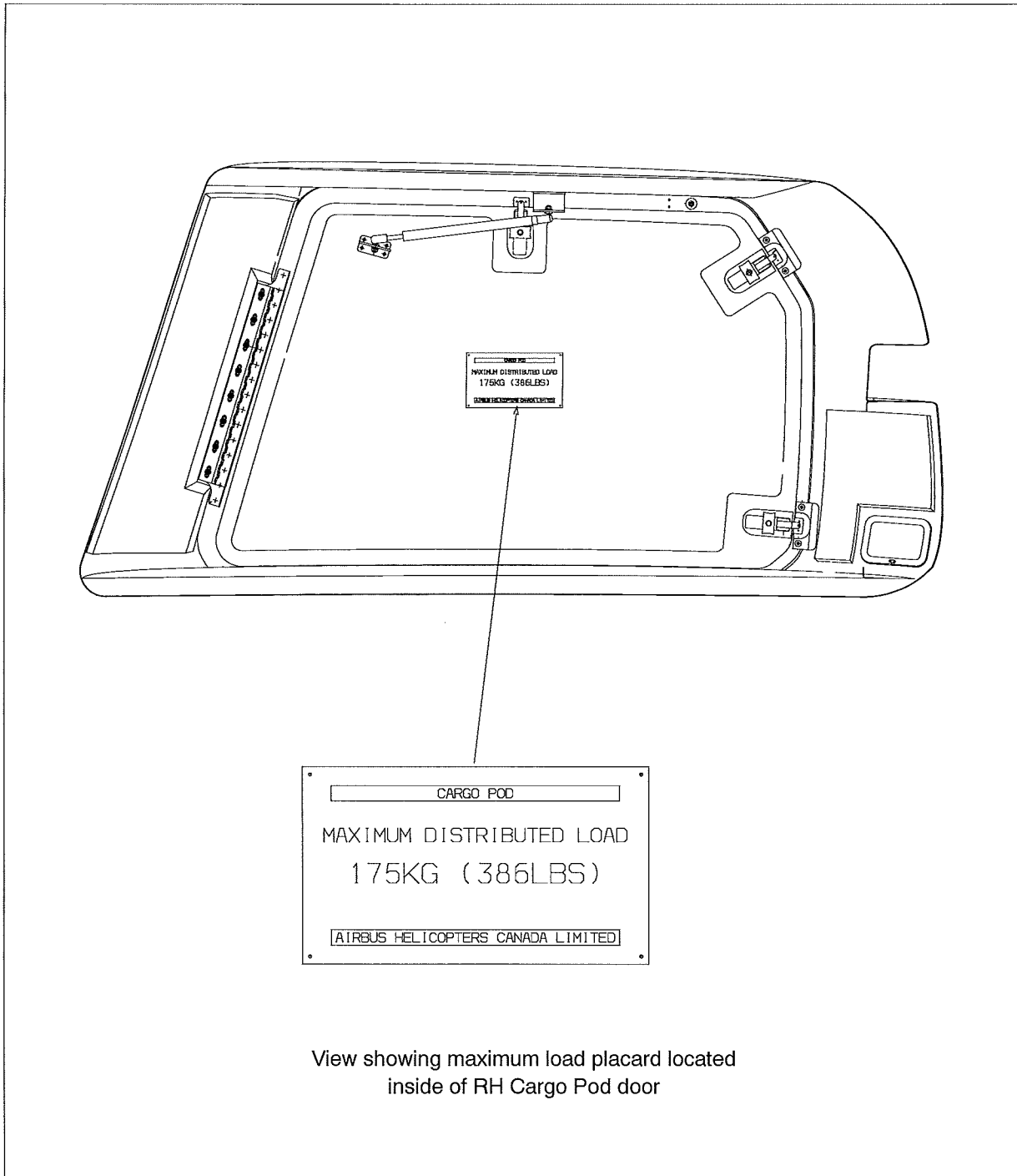


Figure 12 Placard located on inside of RH cargo pod door

Transport Canada - Accepted