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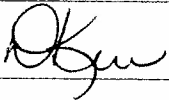
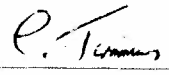
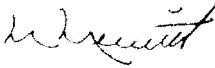


SUBJECT:

Required maintenance for the Enlarged Vertical Reference Window Installation
(P/N 350-201154).

APPLICABILITY :

Aircraft with the subject modification embodied in accordance with TCCA STC. No. SH06-12
or any relevant foreign approvals.

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	NAME AND SIGNATURE	DATE	COMPANY DEPARTMENT
PREPARED BY:	D. Kerr 	2 July 08	ECL ENGINEERING
PREPARED BY:			
CHECKED BY:	C. Timmins 	2 nd July 2008	ECL ENGINEERING
CHECKED BY:	M. Merritt 	2008.07.02	ECL QUALITY ASSURANCE
APP'D / ACCEPTED (Civil A/W Authority)	(see ICA Compliance Check Sheet) 	9 th July 2008	TCCA
RELEASED BY:	R. Manson 	9 Jul 08	ECL ENGINEERING



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RECORD OF REVISIONS

Rev.	Pages at this Revision	Description, Reason Changed Pages	Prepared (name and date)	Checked (name and date)	App'd/Acc'd (Civil A/W Authority) (name and date)	Released (name and date)
0	1 through 27	Original Issue	D. Kerr 6 March 2006	C. Timmins 6 March 2006	TCCA J. Palmer 14 March 2006	R. Manson 20 March 2006
1	1 through 29	Revised to incorporate installation for the AS 355, Int. Belly Panel Mod lay-up revised. (Pages 3 to 7, 9 to 11, 13, 14, 17, 20, 22, and 24 to 29)	D. Kerr 2 June 2006	C. Timmins 2 June 2006	TCCA J. Palmer 13 July 2006	R. Manson 13 July 2006
2	1 through 34	Revised format. Description revised. Addition of NP variants. (Pages 3 to 7, 9 to 25, 27 to 34)	See page 1.	See page 1.	See page 1.	See page 1.

NOTE: Revisions to this document will be distributed to operators of this equipment by the STC holder.
NOTE: Revised portions of affected pages are identified by a vertical black line in the margin adjacent to the change.

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1. GENERAL

A. Introduction

The Enlarged Vertical Reference Window is an optional window for the AS350 / AS355 mounted in the floor of the aircraft, just outboard of the pilot's seat, with a corresponding window in the belly panel. The enlarged window provides better pilot reference, as in long line operations. Refer to Figure 1. This Instruction for Continued Airworthiness is applicable to aircraft with PRE AMS 07 3180 and POST AMS 07 3180, which makes the floor compatible with the pilot's and co-pilot's energy-absorbing seats.

B. Description

The Enlarged Vertical Reference Window consists of the following main components:

COMPONENT	LOCATION
Vertical Reference Window Floor Mod	RHS cabin floor
FWD Belly Panel Mod	First cowling under fuselage
Intermediate Belly Panel Mod	Behind FWD belly panel
Torque Meter Mod	RHS under vertical reference window
Fire Extinguisher Relocation	Relocation depending on a/c configuration and seat type

The belly panel window extends back beyond the aft edge of the lower front fairing. An extension is attached to the back of this fairing, on the right hand side. The front of the intermediate fairing is trimmed back by a similar amount. The landing light, which is located on the RH side of the intermediate fairing, is relocated lower and aft, to clear the enlarged window. Provisions for the light are included in the modifications to the intermediate panel.

This installation includes an option for a second torque indicator (AS 350 B2 without VEMD only), located where it is visible through the floor window. This allows the pilot to monitor the torque during long line operations. It is activated using a switch on the instrument panel, with selection for either the floor or panel mounted indicator.

The fire extinguisher is relocated from its position in the basic aircraft to either:

- back of the pilot's seat (for aircraft with High Back Composite Seat Installation) or
- AFT of the pilot's collective housing or inboard of pilot's collective housing (for aircraft with Energy-Absorbing Type Seat Installation) or
- back of center console (for AS 355 NP version).

The Data Plate is also relocated to the RH exterior of the aircraft.

The AS355 utilizes a smaller floor doubler than the AS350. A floor window stiffener is also installed under the cabin floor just inboard of the floor window.

For instructions for initial installation, see IP-ECL-116.

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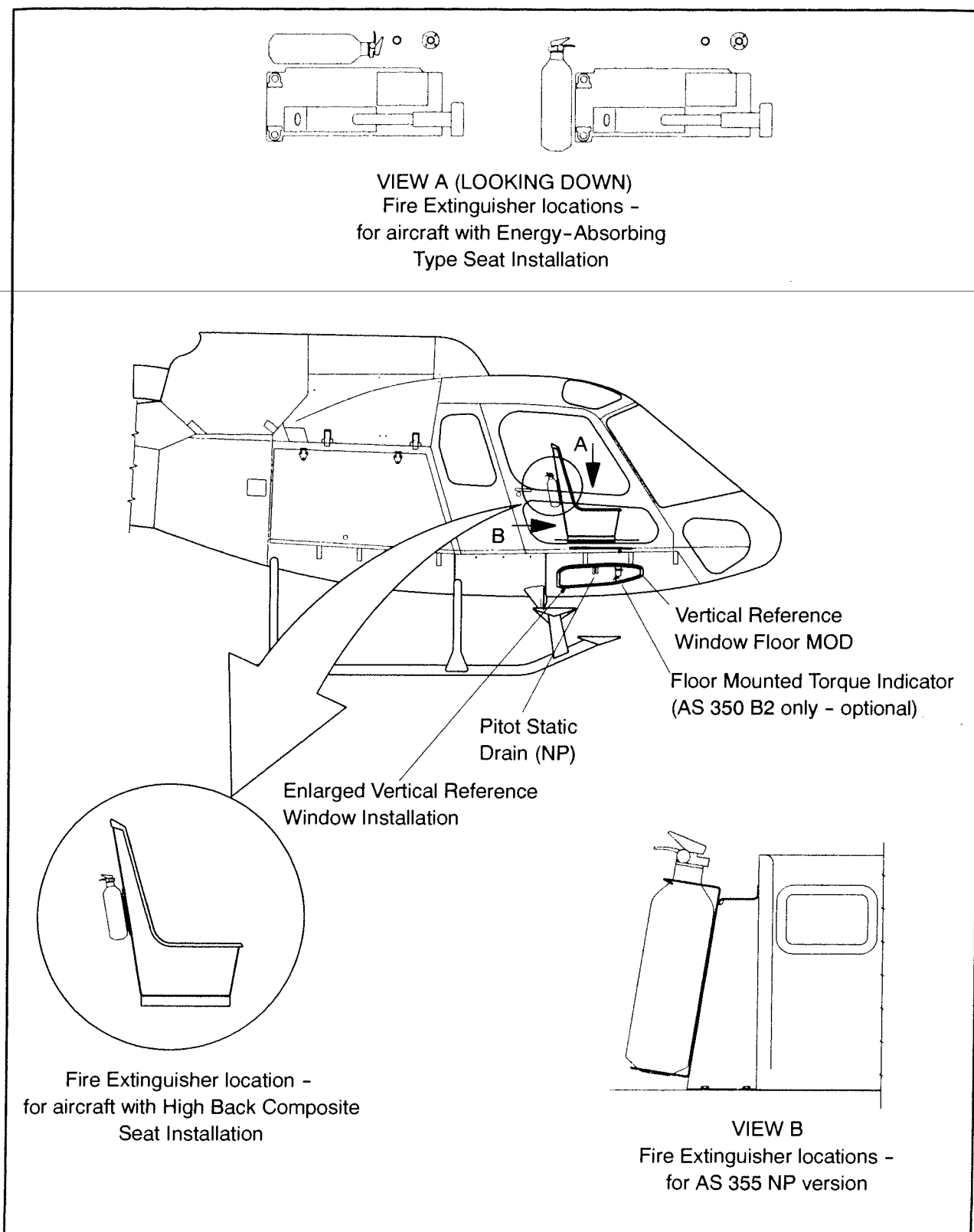


Figure 1 General Layout

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C. REFERENCES

DOCUMENT	DOCUMENT TITLE
AC-43.13 - 1B	Acceptable Methods, Techniques and Practices - Aircraft Inspection and Repair
AMS 07 3180	Avis de Modification Serie 07 3180 Option of Modification Series 07 3180
IP-ECL-116	Installation Procedure, Enlarged Vertical Reference Window
MET	AS 350 / AS 355 Maintenance Manual
MFI.MCS	Fault Isolation and Wiring Diagram Manual
MTC	Standard Practices Manual

D. ABBREVIATIONS & DEFINITIONS

ABBREVIATION	DEFINITION
EC	Eurocopter (France)
ECL	Eurocopter Canada Limited
FWD	Forward
hrs	hours
P/N	Part Number
RH	Right-Hand
VEMD	Vehicle and Engine Multifunction Display

E. UNITS OF MEASUREMENT

ABBREVIATION / SYMBOL	UNIT OF MEASUREMENT
in	inch
kg	kilogram
lb	pound
m	meter

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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.

No airworthiness limitations associated with this installation.

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3. CONTROL AND OPERATION

Apart from the following, control and operation of the aircraft remains unchanged.

The floor mounted torque meter is selected with a toggle switch located on the Instrument Panel which when selected activates an indicator light which remains illuminated while the floor mounted torque meter is in use.

4. INSPECTION SCHEDULE AND MAINTENANCE ACTION

Use torque per EC, MTC, Volume 2, Chapter 20.02.05.404, unless otherwise specified.

4.1. INSPECTION SCHEDULE

4.1.1. Before the first flight of each day:

ITEM	INSPECTION OR MAINTENANCE WORK	CORRECTIVE ACTION
A	- If operating with the floor mounted torque meter, apply power to 31 Alpha Standard Fuse Panel (Master/Battery switch to ON) and: a. Push Press to Test FLOOR TORQUE INDICATOR annunciator	a. If light fails to illuminate, refer to Section 6, Troubleshooting.
B	- Check floor window, item 6, and belly panel window, item 8, in Figure 2, for: a. cleanliness b. general condition	a. Clean windows with commercially available plastic cleaner. b. Contact Eurocopter Canada Limited for replacement parts.

Table 1 Inspection Schedule and Maintenance Action
Before the first flight of each day

4.1.2. Every 100 flight hrs or 12 months (to coincide with the 100 hrs or 12 month helicopter inspection), whichever occurs first:

ITEM	INSPECTION OR MAINTENANCE WORK	CORRECTIVE ACTION
A	- Inspect velcro, item 9 on Floor Window Cover, item 1, in Figure 2, for: a. wear (tears, areas have become worn)	a. Wear is not permitted, if wear is evident, replace Velcro in accordance with EC MTC, Volume 3, Chapter 20.03.04.406.
B	- Inspect floor window, item 6 and belly panel window, item 8, in Figure 2, for: a. cracking or crazing	a. No cracking or crazing is allowed. If cracking or crazing is found replace window. Contact Eurocopter Canada Limited for replacement parts.

Table 2 Inspection Schedule and Maintenance Action
Every 100 flight hrs or 12 months, whichever occurs first
(continued on following page)

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4.1. INSPECTION SCHEDULE (continued)

4.1.2. Every 100 flight hrs or 12 months (to coincide with the 100 hrs or 12 month helicopter inspection), whichever occurs first:

ITEM	INSPECTION OR MAINTENANCE WORK	CORRECTIVE ACTION
C	<ul style="list-style-type: none"> - Visually inspect window channel seal, item 7, between FWD belly panel, item 10, and belly panel window, item 8, in Figure 2, for: <ul style="list-style-type: none"> a. cuts and cracking 	<ul style="list-style-type: none"> a. If cuts and cracks are evident, replace window seal in accordance with EC, MET, Volume 3, Chapter 52.00.00.401
D	<ul style="list-style-type: none"> - Visually inspect FWD belly panel Mod, item 1, and intermediate belly panel MOD, item 2, in Figure 3, for: <ul style="list-style-type: none"> a. general condition 	<ul style="list-style-type: none"> a. If cracking, delamination or debonding is found, repairs must be performed by qualified composite personnel. Repairs may be accomplished in accordance with EC MTC, Volume 3, Chapter 20.03.07.101, or AC 43.13-1B, Chapter 3, Section 1. (Refer to Figures 6, 7, 8, and 9 for Composite Lay up).
E	<ul style="list-style-type: none"> - Check fire extinguisher installation attachment hardware, items 1, 2 and 3, in Figure 4 for: <ul style="list-style-type: none"> a. security 	<ul style="list-style-type: none"> a. Re-tighten as required.
F	<ul style="list-style-type: none"> - Check placards and markings, in Figures 15, 16, 17, 18, 19, 20 and 21 (Section 10) for: <ul style="list-style-type: none"> a. legibility b. secure mounting 	<ul style="list-style-type: none"> a. If placards and markings have become illegible, contact ECL for replacement parts (refer to IP-ECL-116). NOTE Data Plate (Figure 14) will not be replaced. b. Secure or reattach placards and markings as required

Table 2 Inspection Schedule and Maintenance Action
Every 100 flight hrs or 12 months, whichever occurs first

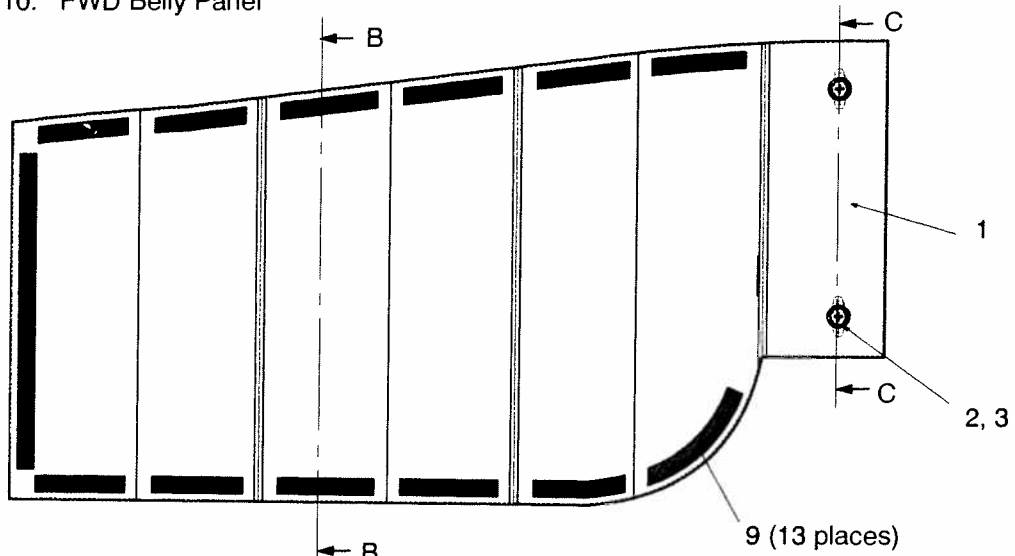
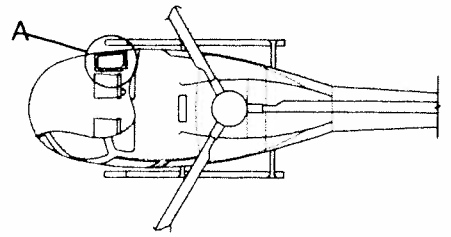
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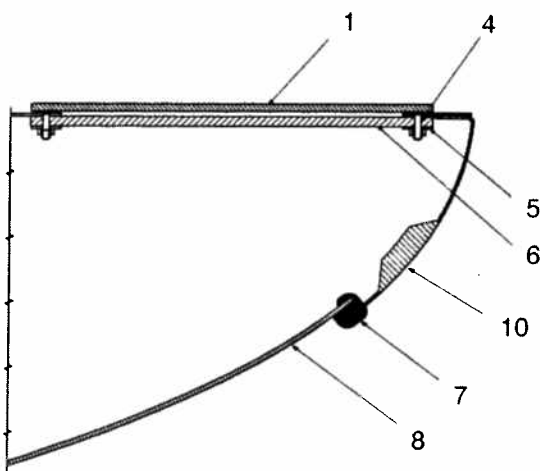
Legend (for Figure 2)

Item	Description
1.	Floor Window Cover
2.	Screw
3.	Washer
4.	Countersunk Screws
5.	Floor Window Backing Plate
6.	Floor Window
7.	Window Channel Seal
8.	Belly Panel Window
9.	Velcro
10.	FWD Belly Panel

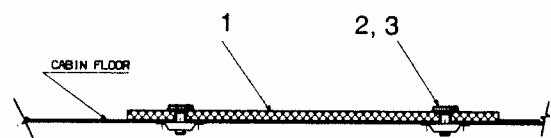
←
DIRECTION
OF FLIGHT



DETAIL A



SECTION B - B
(90° ROTATED)



SECTION C - C
(90° ROTATED)

Figure 2 Floor Window Cover

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Legend (for Figure 3)

Item	Description
1.	Forward Belly Panel Mod
2.	Intermediate Belly Panel Mod

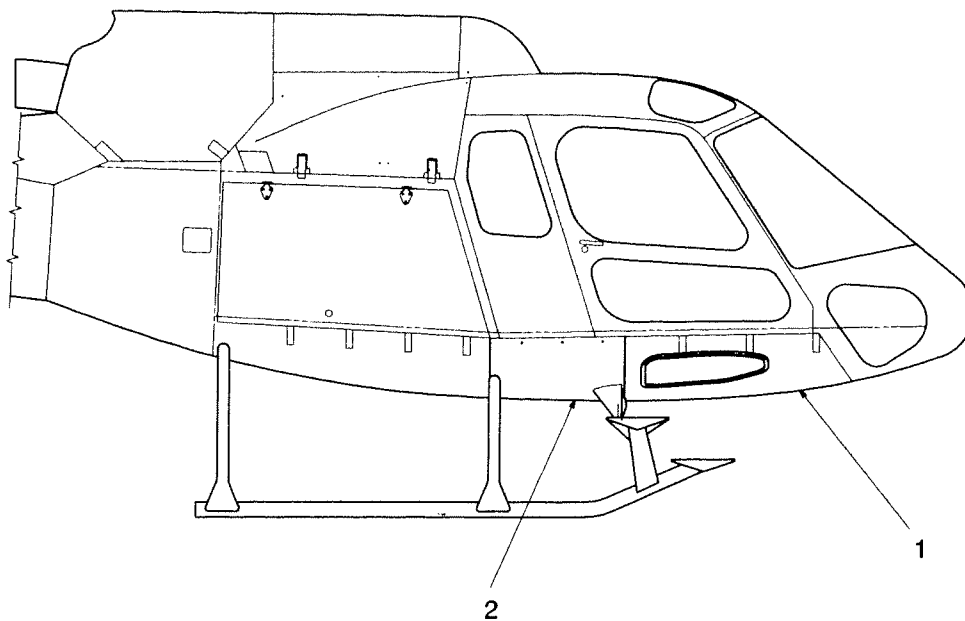


Figure 3 Forward and Intermediate Belly Panels

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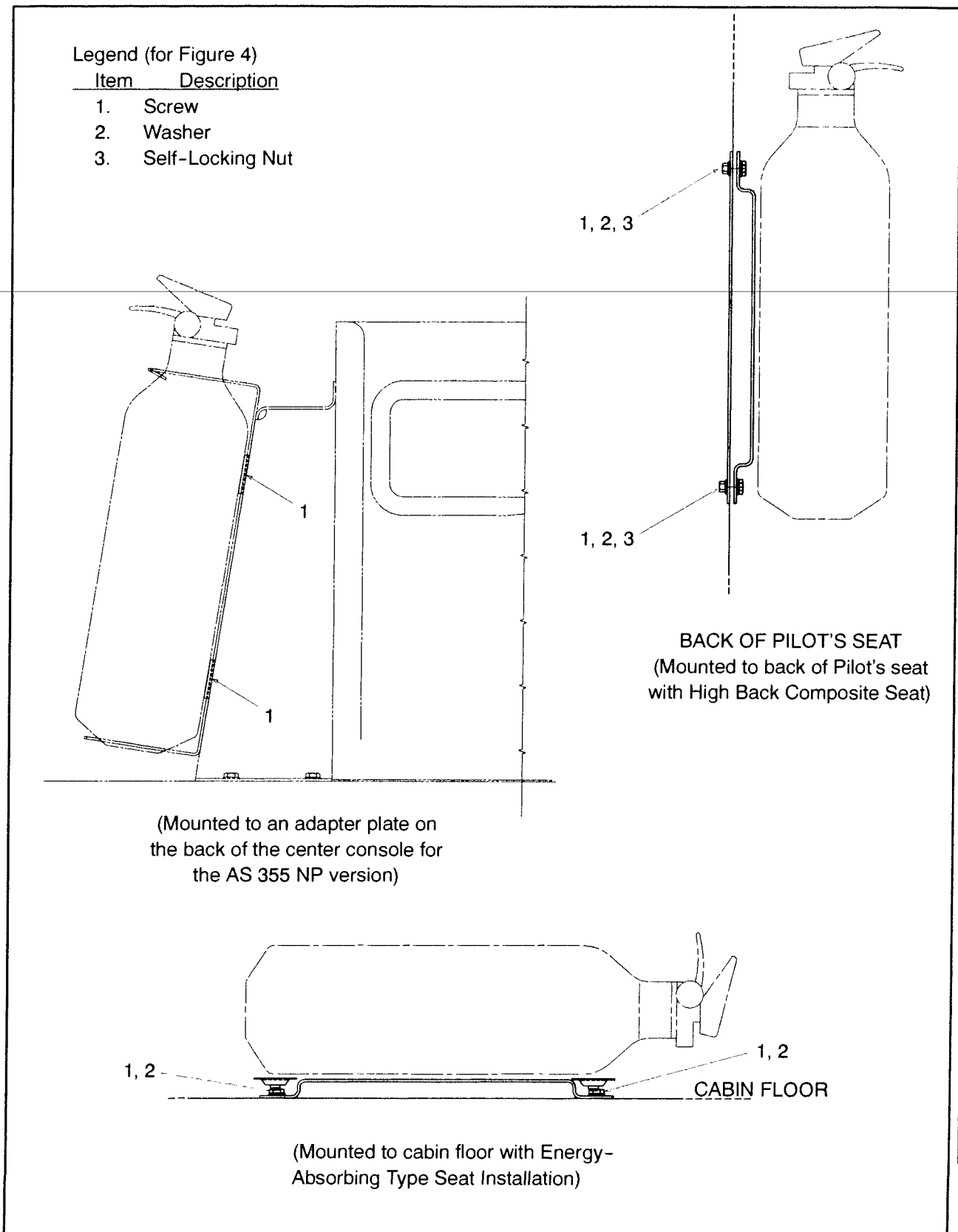


Figure 4 Fire Extinguisher Installation

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5. OVERHAUL REQUIREMENTS

No overhaul requirements for this installation.

6. TROUBLESHOOTING

For electrical system troubleshooting for aircraft with the optional Floor Mounted Torque Indicator Option, refer to Figure 5 Wiring Diagram shown with Floor-Mounted Torque Indicator Option - to be used with Control Panel in Figure 18 (original diagram) or Figure 6 Wiring Diagram shown with Floor-Mounted Torque Indicator Option - to be used with Control Panel in Figure 19.

ITEM	TROUBLE / SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
1	Indicator light on the Instrument Panel does not illuminate during Daily Preflight Inspection	Bulb burnt out. Break or short in activator circuits	Replace bulb, P/N MS25041-3 Perform circuit continuity check and repair/replace wiring as applicable in accordance with AC43.13-1B, Chapter 11, Section 1
2	Indicator light illuminates during operation when floor mounted torque indicator is not in use	Short in annunciator circuit.	Perform circuit continuity check and repair/replace wiring as applicable in accordance with AC43.13-1B, Chapter 11, Section 1

Table 3 Troubleshooting Guide

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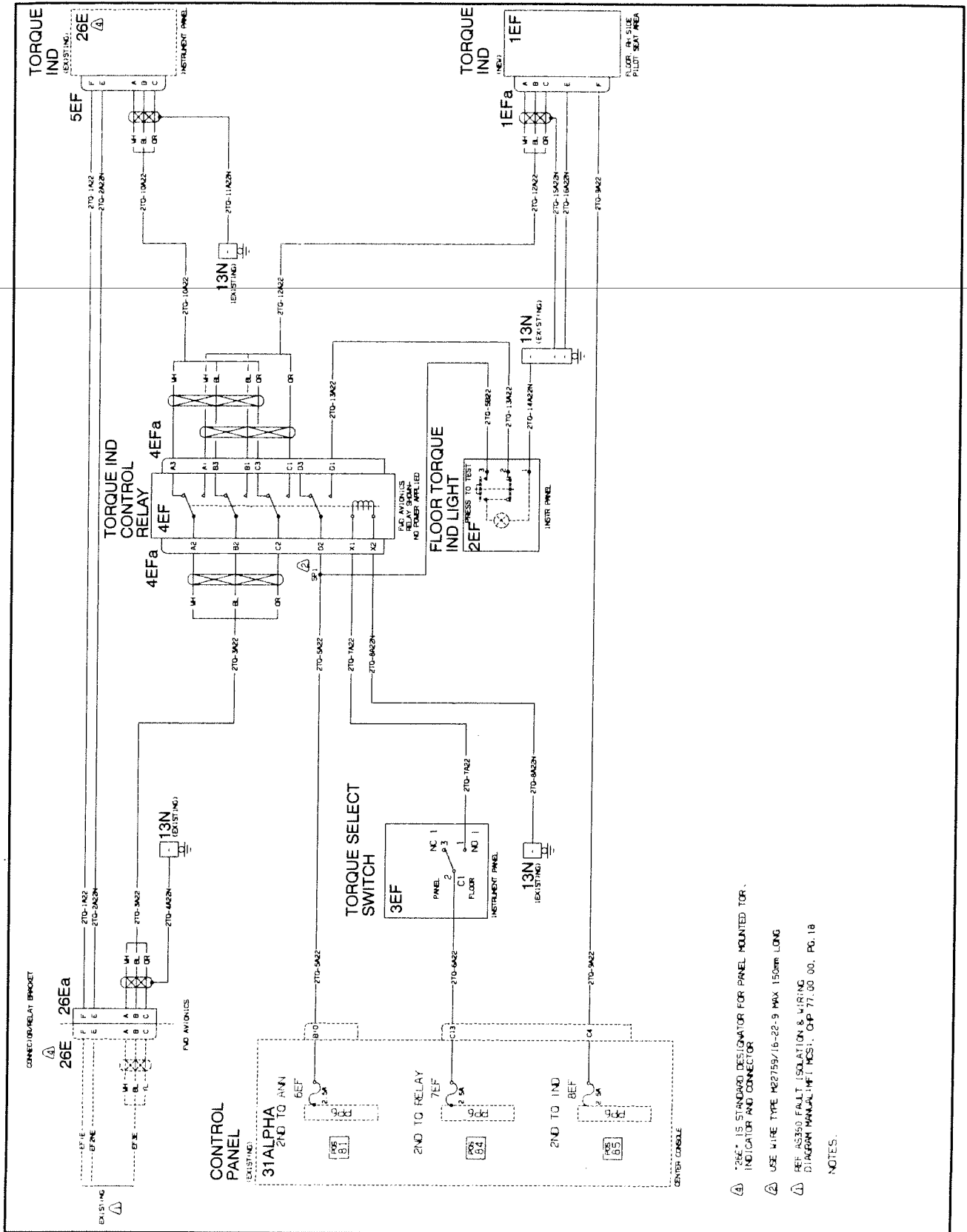


Figure 5 Wiring Diagram shown with Floor-Mounted Torque Indicator Option - to be used with Control Panel in Figure 18 (original diagram)

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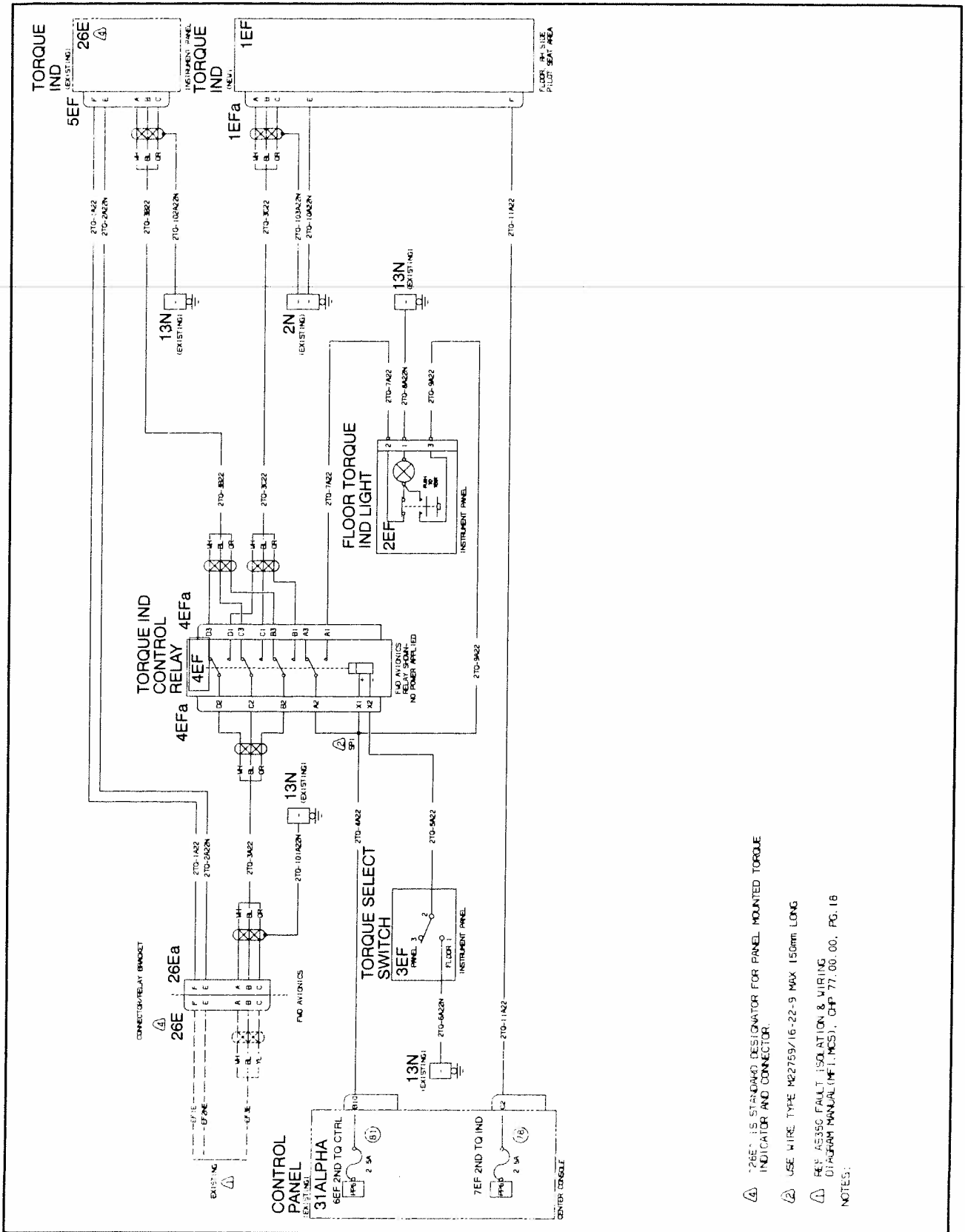


Figure 6 Wiring Diagram shown with Floor-Mounted Torque Indicator Option - to be used with Control Panel in Figure 19

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7. SPECIAL TOOLING

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

8. REMOVAL AND REPLACEMENT

Proceed as follows if any of these items need to be removed.

Preliminaries

- disconnect the battery
- Remove forward belly panel MOD (1) and store for reinstallation. Refer to Figure 2. (Removal / Installation refer to AS 350 / AS 355 Maintenance Manual Chapter 53.00.00.405)

A. REMOVAL

- 1) Floor Window (Refer to Figure 2)
 - a) Remove screws (2) (2 places), and washers (3) (2 places) and remove floor window cover (1).
 - b) Remove countersunk screws (4) (21 places), and remove floor window (6), and floor window backing plate (5).
- 2) Belly Panel Window (Refer to Figure 2)
 - a) Remove window channel seal (7) from belly panel window (8) in accordance with the AS 350 / AS 355 Maintenance Manual, Volume 3, Chapter 52.00.00.401.
 - b) Remove belly panel window (8).
- 3) Optional Floor Mounted Torque Meter Installation (AS 350 B2 without VEMD only, refer to Figure 7 if aircraft utilizes original installation or Figure 8 if aircraft has reinforced floor).
 - a) Disconnect wiring harness (2) from torque meter (1).
 - b) Disconnect clamp (6) from support bracket (9) by removing screw (3), washer (4), and nut (5).
 - c) Remove screws (7) (4 places) from mounting bracket (8) and remove torque meter (1).

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B. REPLACEMENT

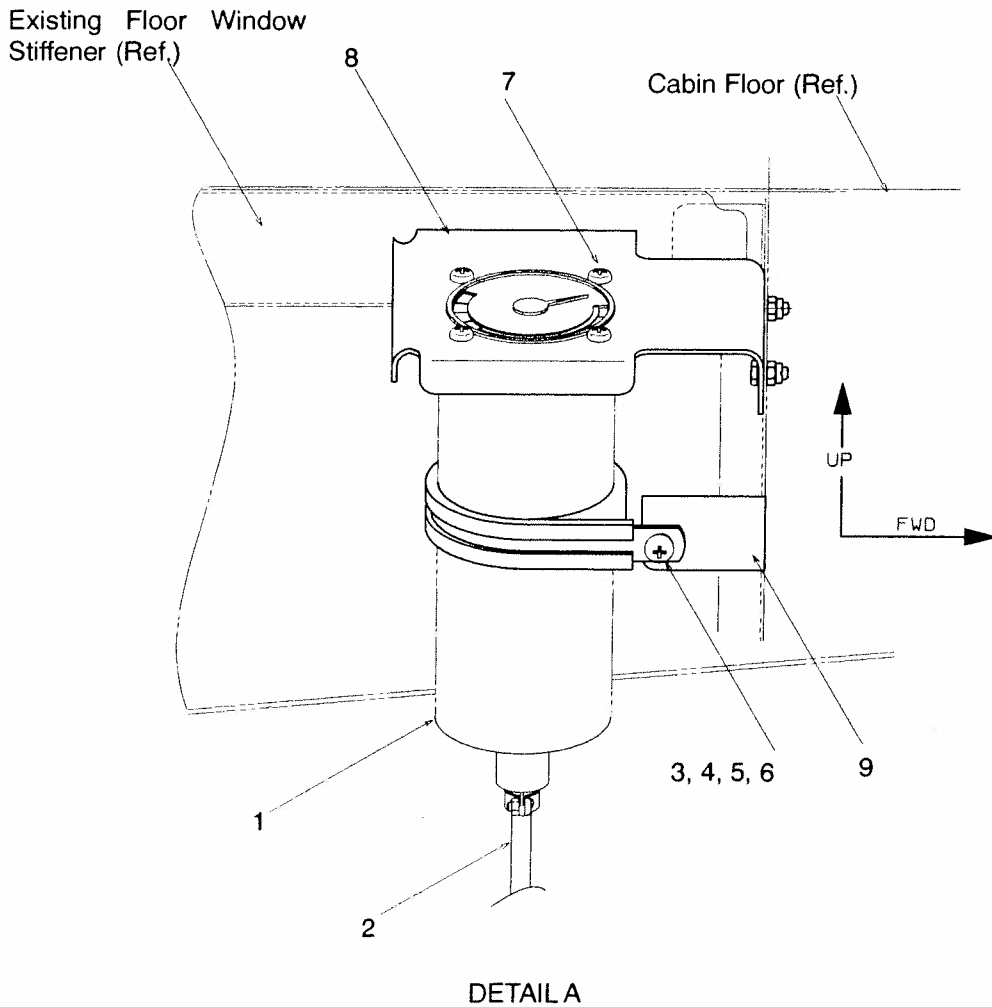
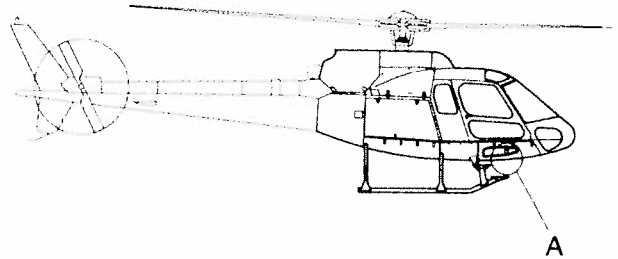
NOTE Use torque per EC, MTC, Volume 2, Chapter 20.02.05.404, unless otherwise specified.

- 1) Floor Mounted Torque Meter Installation if installed (AS 350 B2 without VEMD only, refer to Figure 7 if aircraft utilizes original installation or Figure 8 if aircraft utilizes alternative installation).
 - a) Position torque meter (1) on mounting bracket (8) and secure using screws (7) (4 places).
 - b) Secure clamp (6) around torque meter (1) to support bracket (9) using screw (3), washer (4), and nut (5).
 - c) Reconnect wiring harness connector (2) to torque meter (1).
- 2) Belly Panel Window (Refer to Figure 2)
 - a) Reinstall belly panel window (8) with window channel seal (7) in accordance with the AS 350 / AS 355 Maintenance Manual, Volume 3, Chapter 52.00.00.401.
- 3) Floor Window (Refer to Figure 2)
 - a) Position floor window (6), and floor window backing plate (5) and secure using countersunk screws (4) (21 places).
 - b) Position floor window cover (1) and secure to floor using screws (2) (2 places), and washers (3) (2 places).
- 4) Reinstall forward belly panel Mod (1). Refer to Figure 2. (Removal / Installation refer to AS 350 / AS 355 Maintenance Manual Chapter 53.00.00.405)
- 5) Reinstall forward belly panel.
- 6) Reconnect battery.

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Legend (for Figure 7)

Item	Description
1.	Torque Indicator
2.	Wiring Harness
3.	Screw
4.	Washer
5.	Nut
6.	Clamp
7.	Screw
8.	Mounting Bracket
9.	Support Bracket



Note For the AS 350 B2 without VEMD only

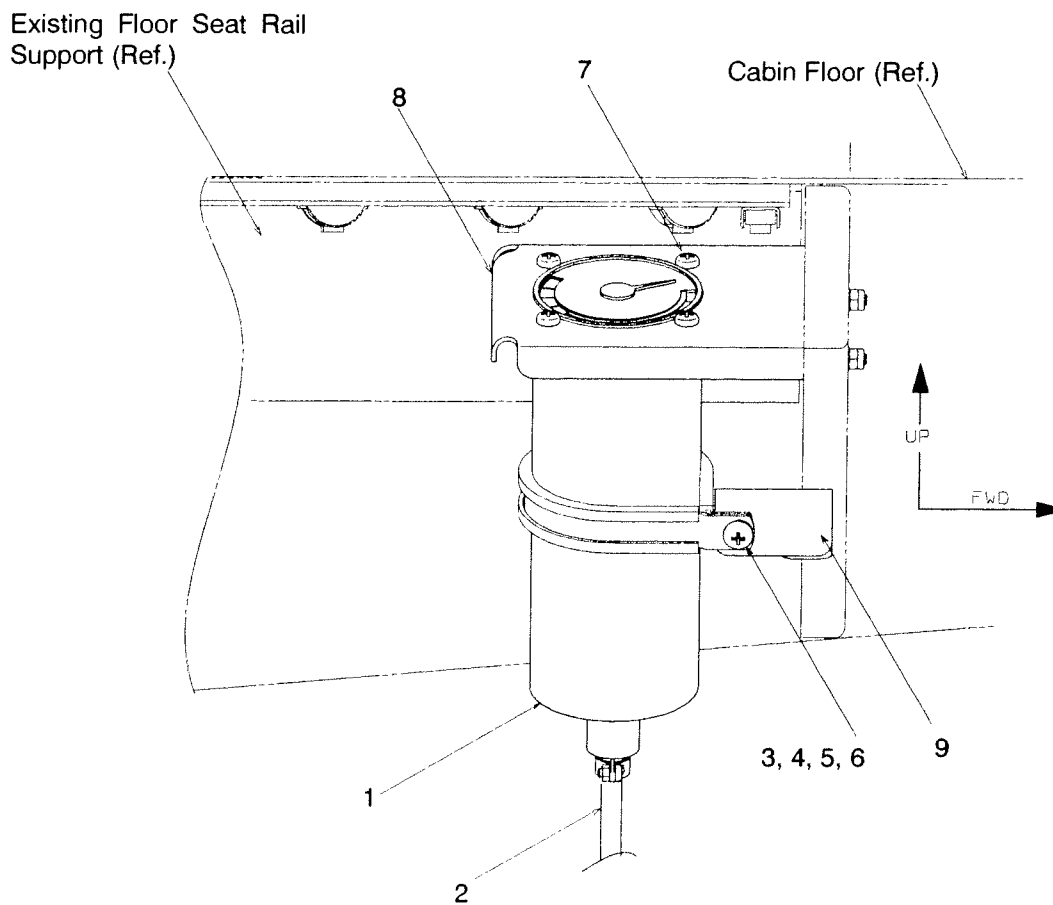
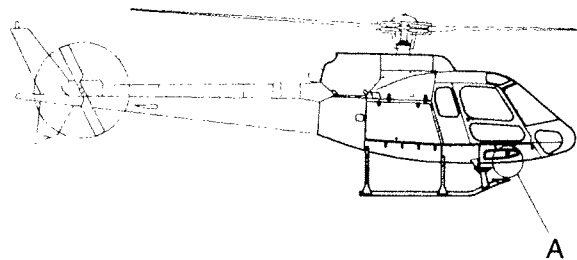
Figure 7 Floor-Mounted Torque Indicator Option

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Legend (for Figure 8)

Item	Description
1.	Torque Indicator
2.	Wiring Harness
3.	Screw
4.	Washer
5.	Nut
6.	Clamp
7.	Screw
8.	Mounting Bracket
9.	Support Bracket



DETAIL A

Note For the AS 350 B2 without VEMD only

Figure 8 Floor-Mounted Torque Indicator Option
(aircraft with reinforced floor shown)

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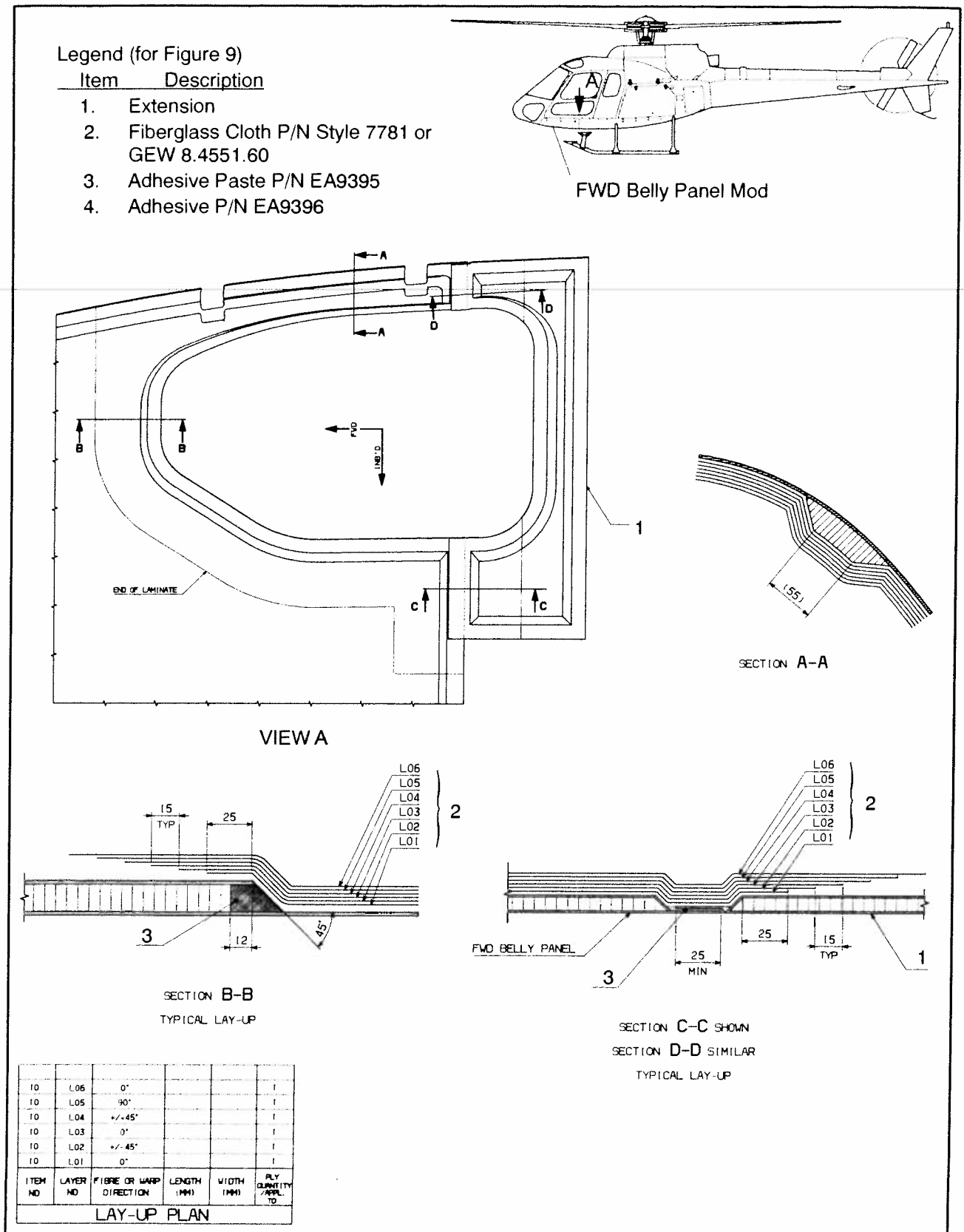


Figure 9 Forward Belly Panel MOD - Composite Lay-up

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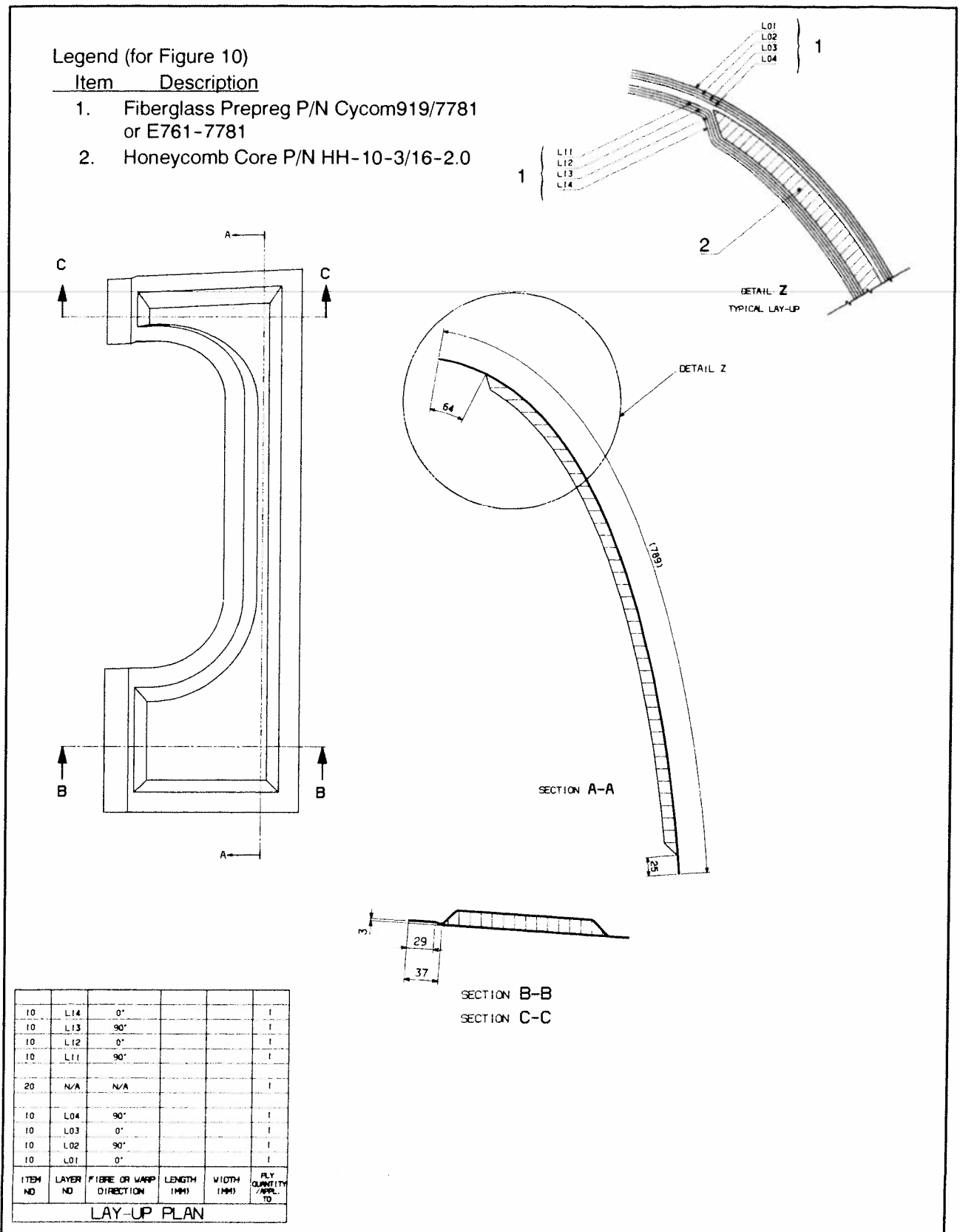


Figure 10 Extension - Composite Lay-up

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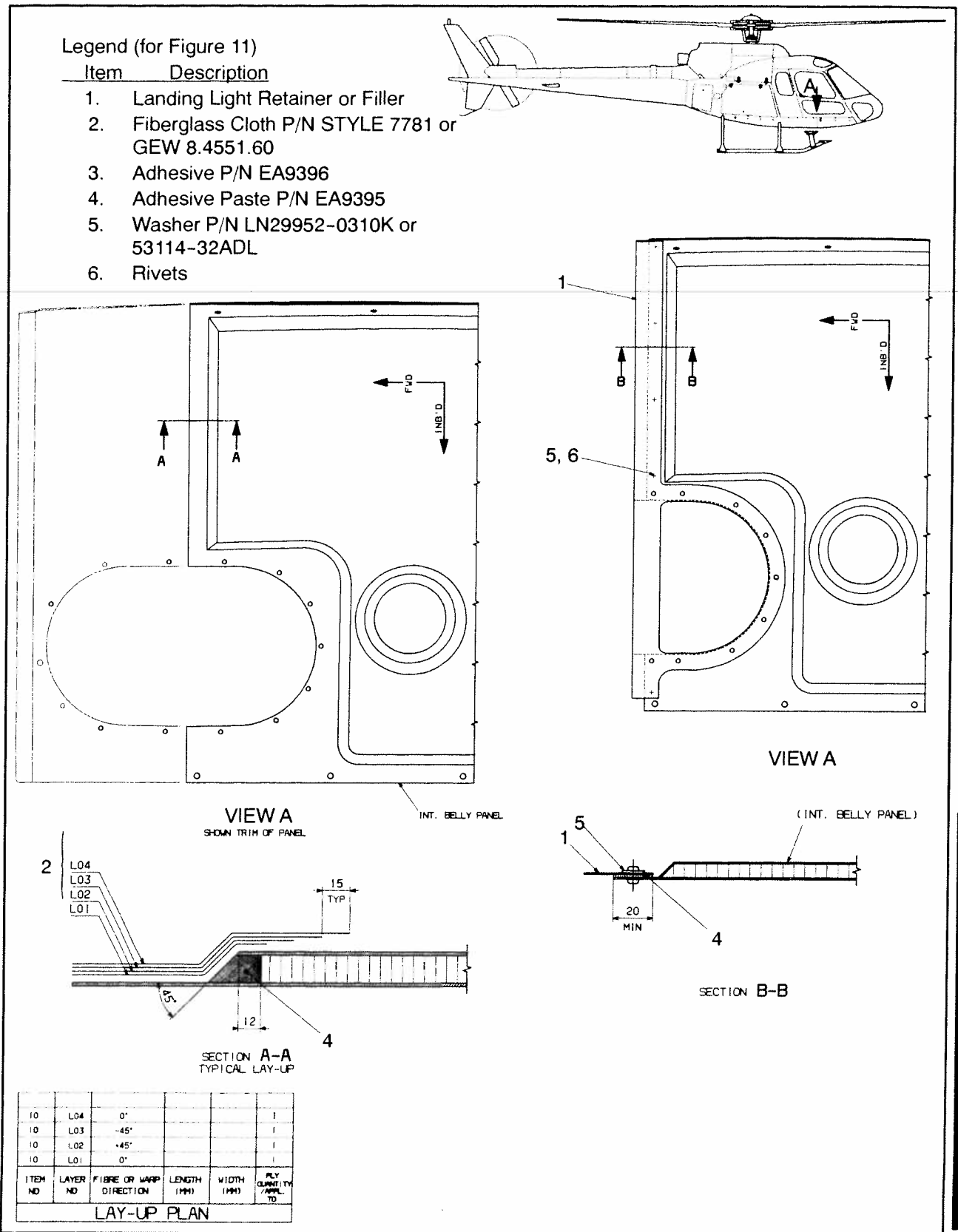


Figure 11 Intermediate Belly Panel MOD - Composite Lay-up

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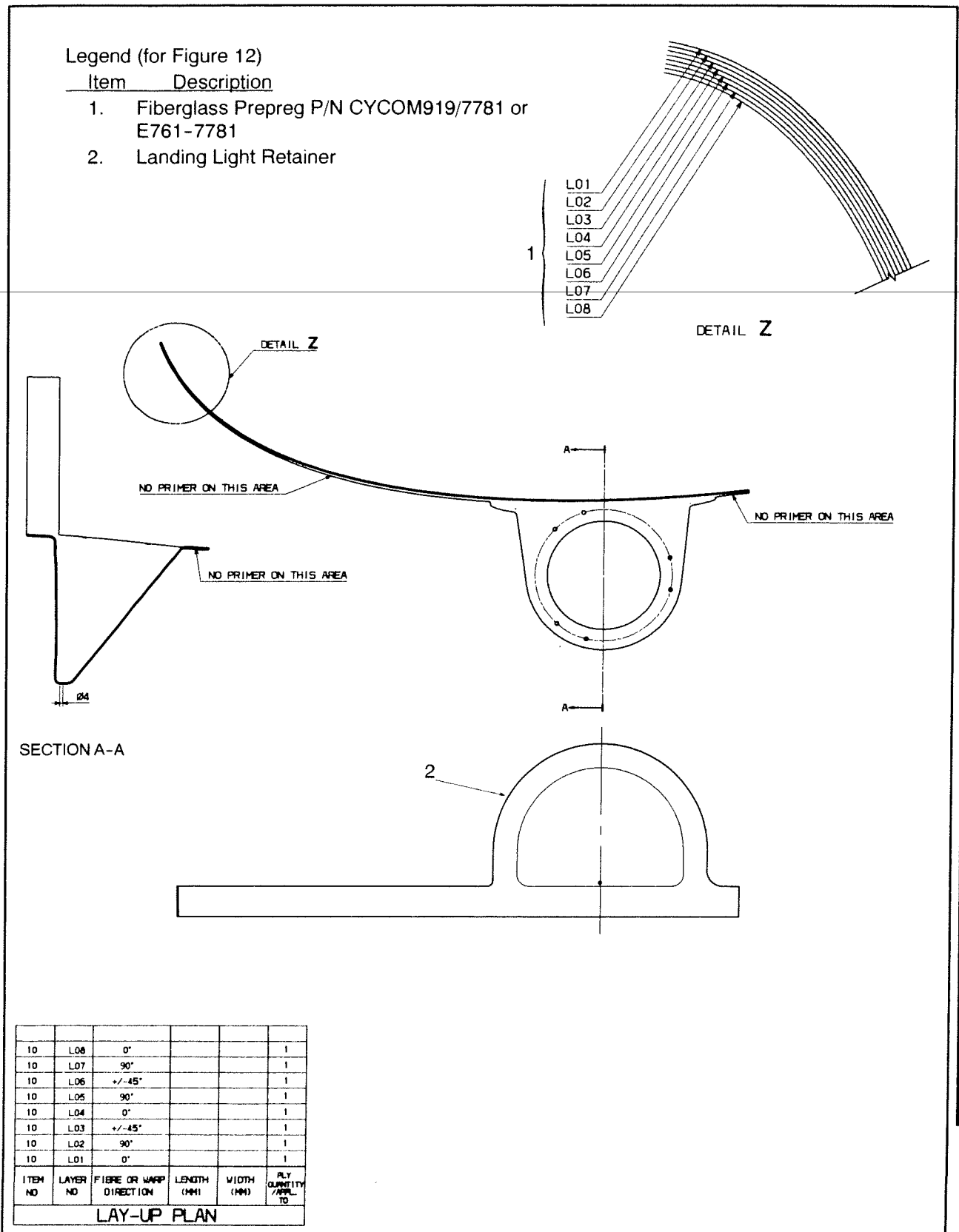
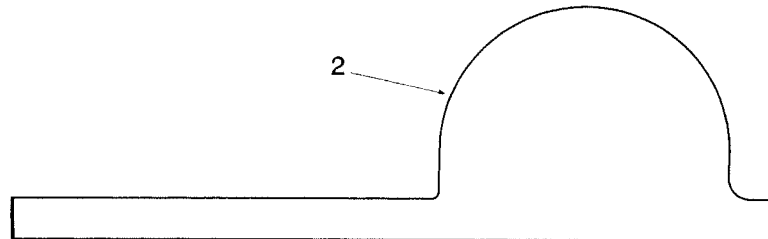
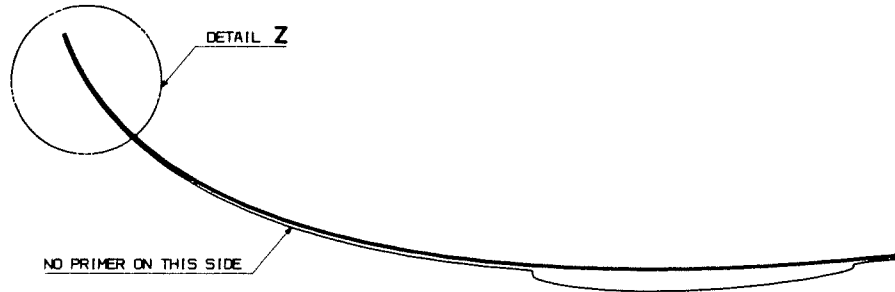
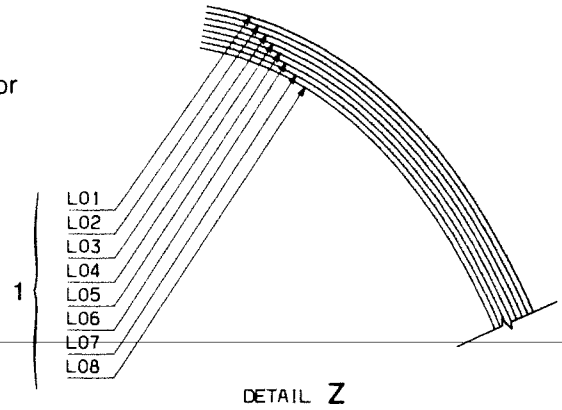


Figure 12 Landing Light Retainer - Composite Lay-up

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Legend (for Figure 13)

- | Item | Description |
|------|---|
| 1. | Fiberglass Prepreg P/N CYCOM919/7781 or E761-7781 |
| 2. | Landing Light Filler |



10	L08	0°			1
10	L07	90°			1
10	L06	+/-45°			1
10	L05	90°			1
10	L04	0°			1
10	L03	+/-45°			1
10	L02	90°			1
10	L01	0°			1
ITEM NO	LAYER NO	FIBRE OR WARP DIRECTION	LENGTH (MM)	WIDTH (MM)	PLY QUANTITY /APPL. TO

LAY-UP PLAN

Figure 13 Landing Light Filler - Composite Lay-up

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9. WEIGHT AND BALANCE DATA

A. Removed Items

DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
Floor Cut-out	- 0.29	- 0.6	1.55	61.0	- 0.45	- 36.6
Belly Panel Cut-out	- 0.59	- 1.3	1.55	61.0	- 0.91	- 79.3
Basic aircraft Fire Extinguisher	- 1.89	- 4.2	1.67	65.7	- 3.16	- 275.9
Total	- 2.77	- 6.1	1.63	64.2	- 4.52	- 391.8

B. Added Items - without Floor-Mounted Torque Indicator Option

DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
Floor Window	0.86	1.9	1.55	61.0	1.33	115.9
Belly Panel Window	0.83	1.8	1.55	61.0	1.29	109.8
Fire Extinguisher Relocation	1.75	3.9	1.94	76.4	3.40	298.0
Floor Window Inst. Hardware	0.70	1.5	1.55	61.0	1.09	91.5
Belly Panel Window Provision	1.35	3.0	1.55	61.0	2.09	183.0
Misc. (Rivets, Washers, Screws)	0.08	0.2	1.55	61.0	0.12	12.2
Total	5.57	12.3	1.67	65.9	9.32	810.4

C. Optional Items

DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
Torque Indicator Installation	0.96	2.1	1.37	53.9	1.32	113.2

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10. **PLACARDS AND MARKINGS**

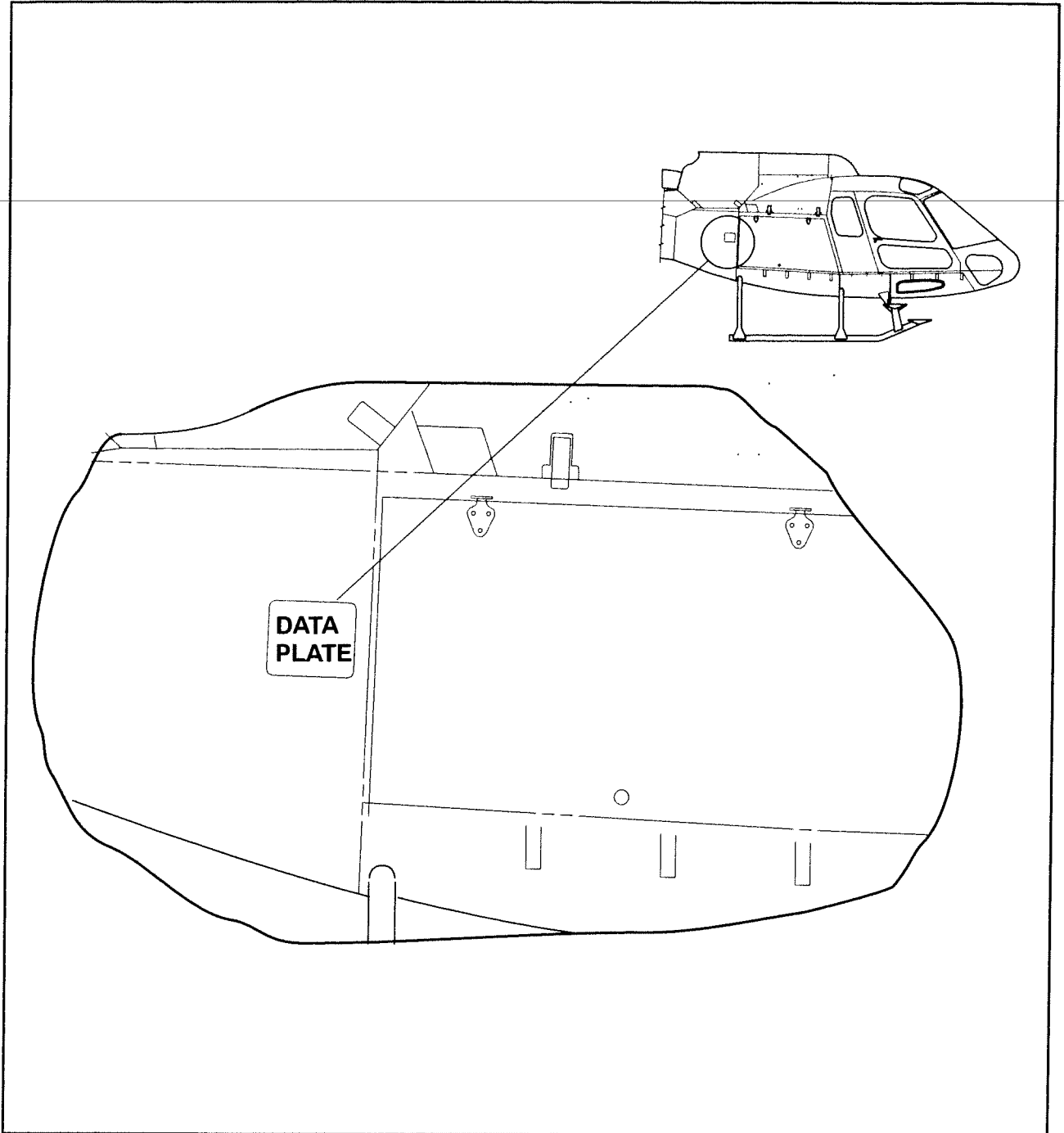


Figure 14 Data Plate Relocation

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10. **PLACARDS AND MARKINGS (continued)**

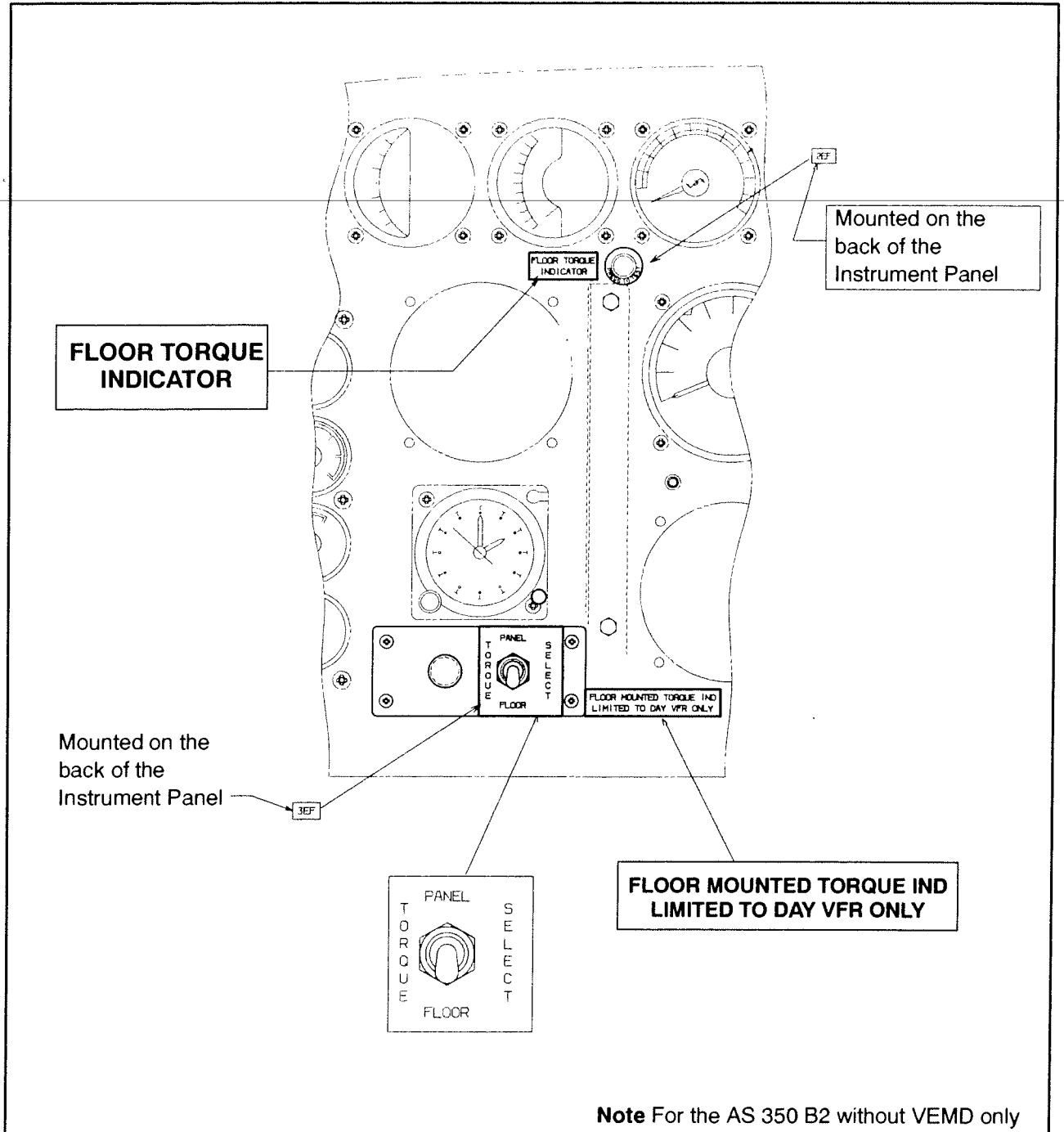


Figure 15 Placards on Instrument Panel with Floor-Mounted Torque Indicator Option

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10. **PLACARDS AND MARKINGS** (continued)

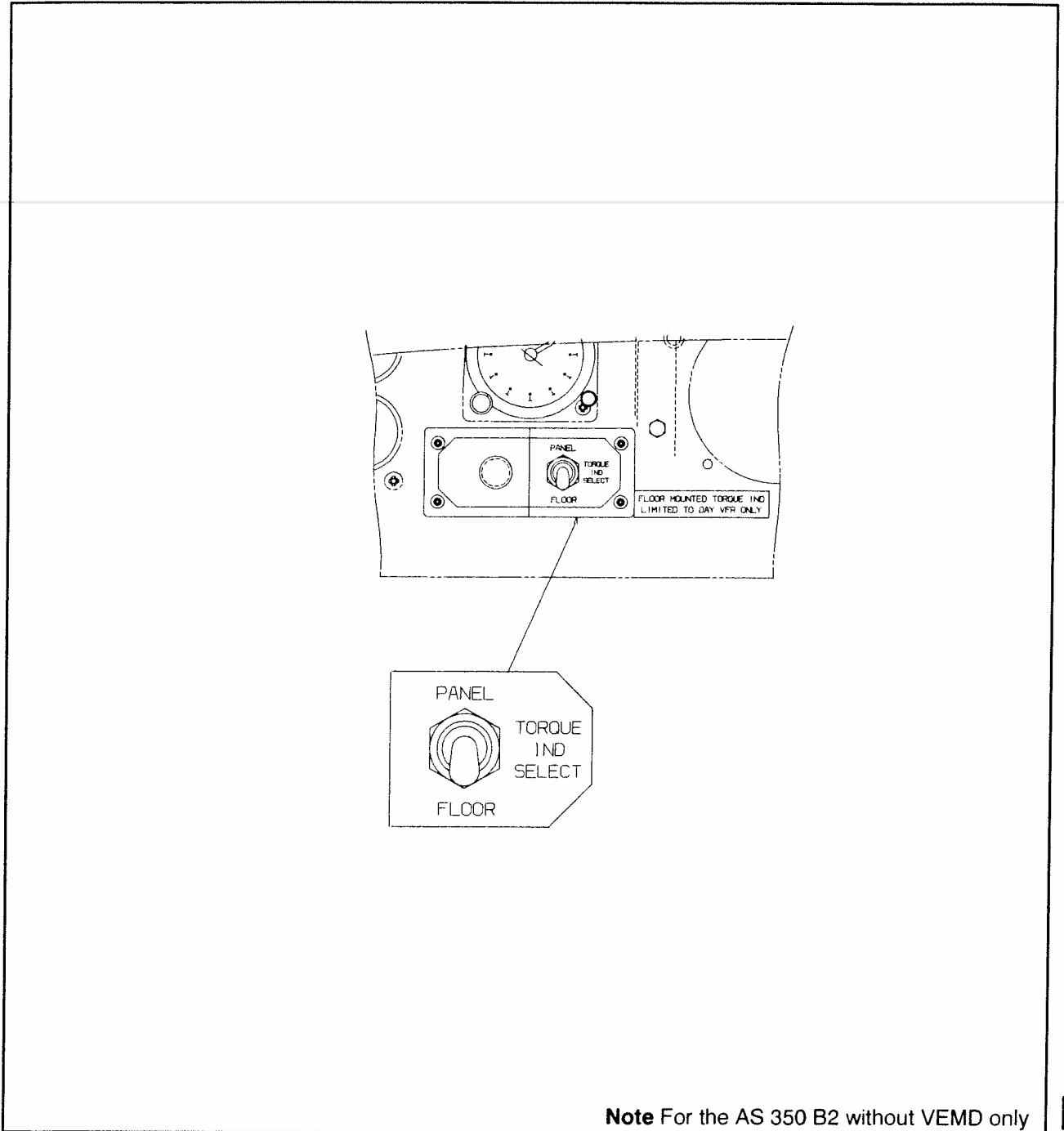


Figure 16 Placard on Instrument Panel with Floor-Mounted Torque Indicator Option

Transport Canada Accepted

10. **PLACARDS AND MARKINGS (continued)**

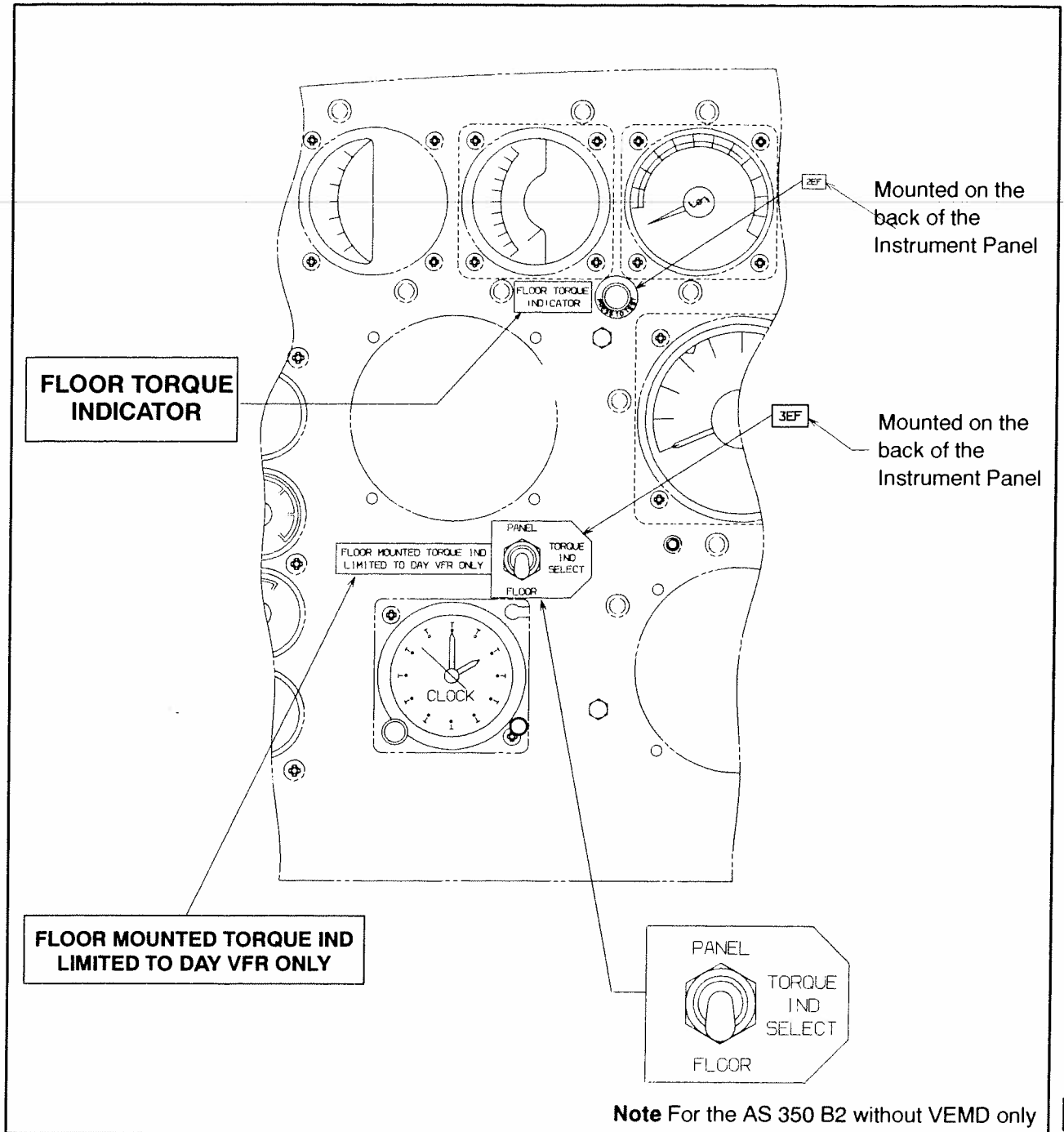


Figure 17 Placards on Instrument Panel alternate location with Floor-Mounted Torque Indicator Option

Transport Canada Accepted

10. **PLACARDS AND MARKINGS** (continued)

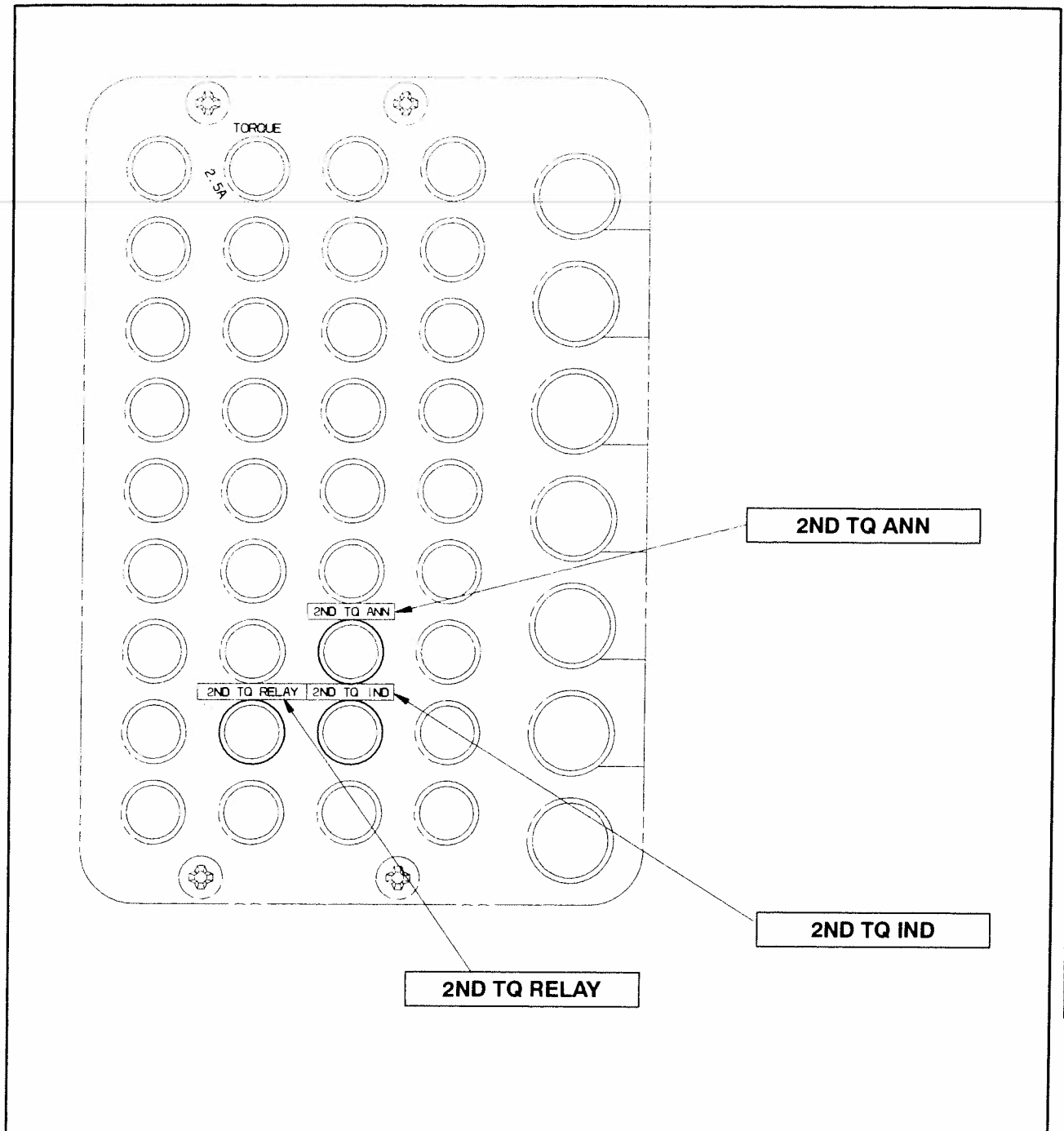


Figure 18 Placards on control panel with Floor-Mounted Torque Indicator Option

Transport Canada Accepted

10. **PLACARDS AND MARKINGS** (continued)

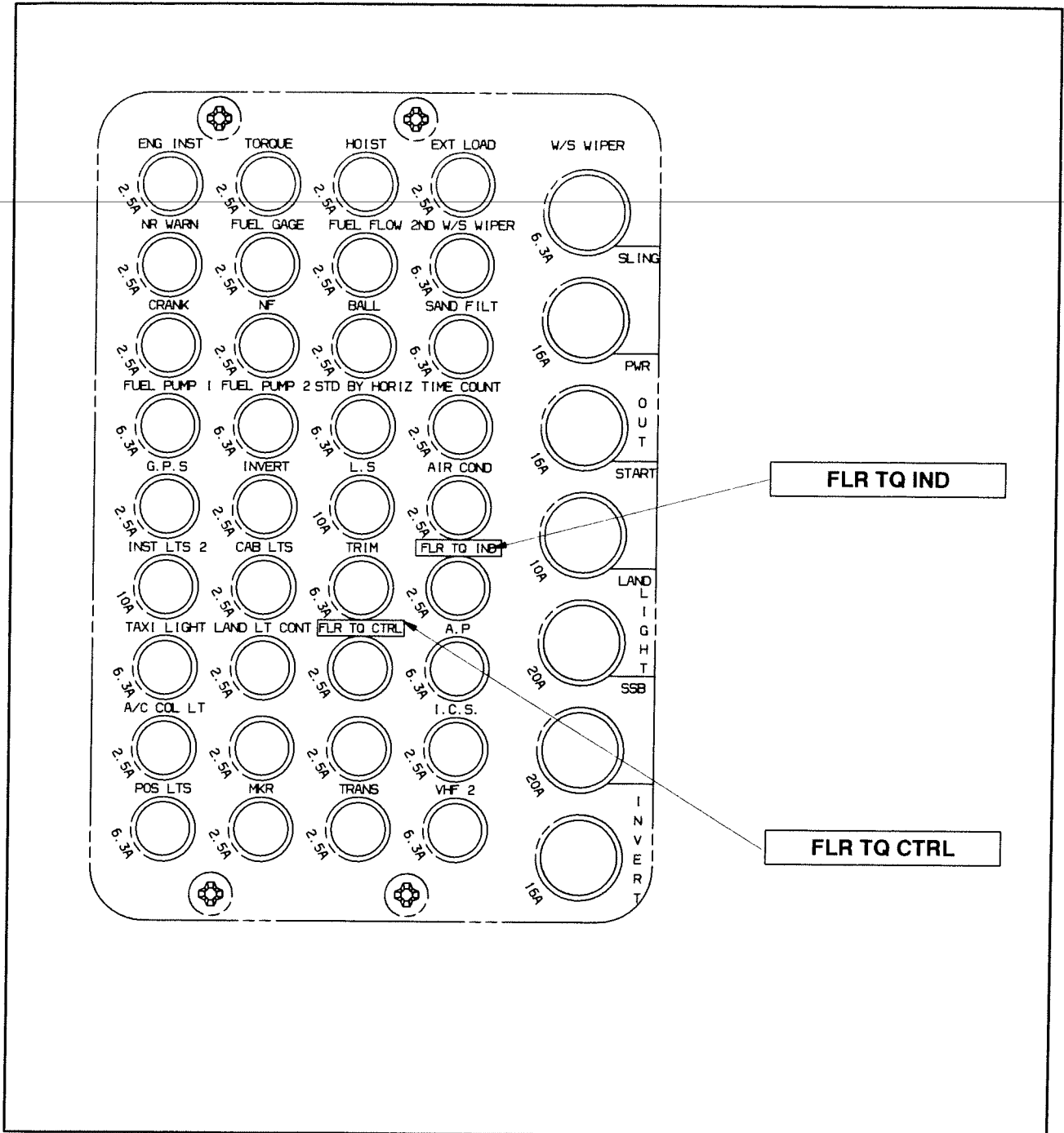


Figure 19 Placards on alternative control panel with Floor-Mounted Torque Indicator Option

Transport Canada Accepted

10. **PLACARDS AND MARKINGS** (continued)

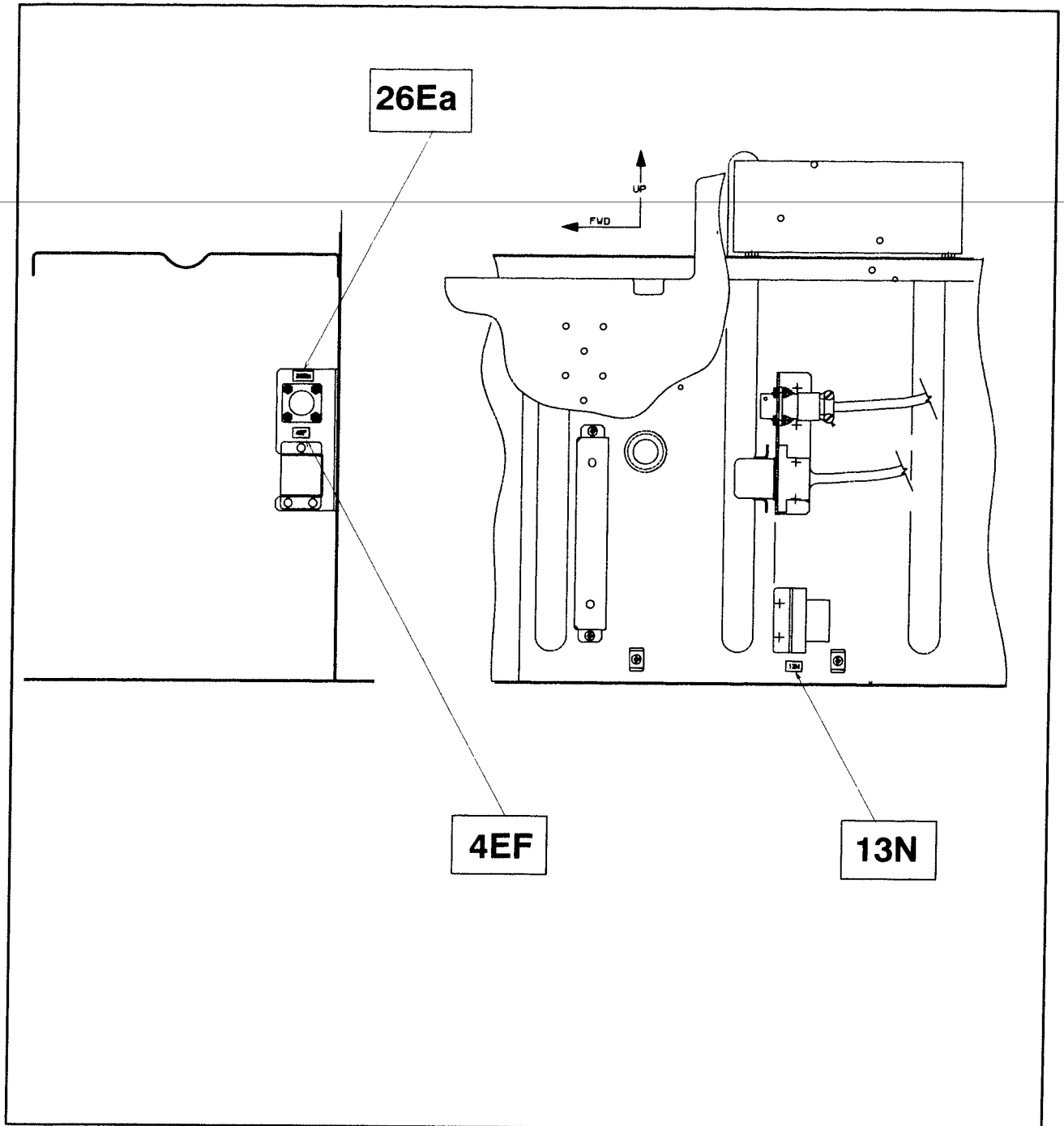


Figure 20 Placards FWD of center console in Nose Bay, LHS -
with Floor-Mounted Torque Indicator Option

Transport Canada Accepted

10. **PLACARDS AND MARKINGS**

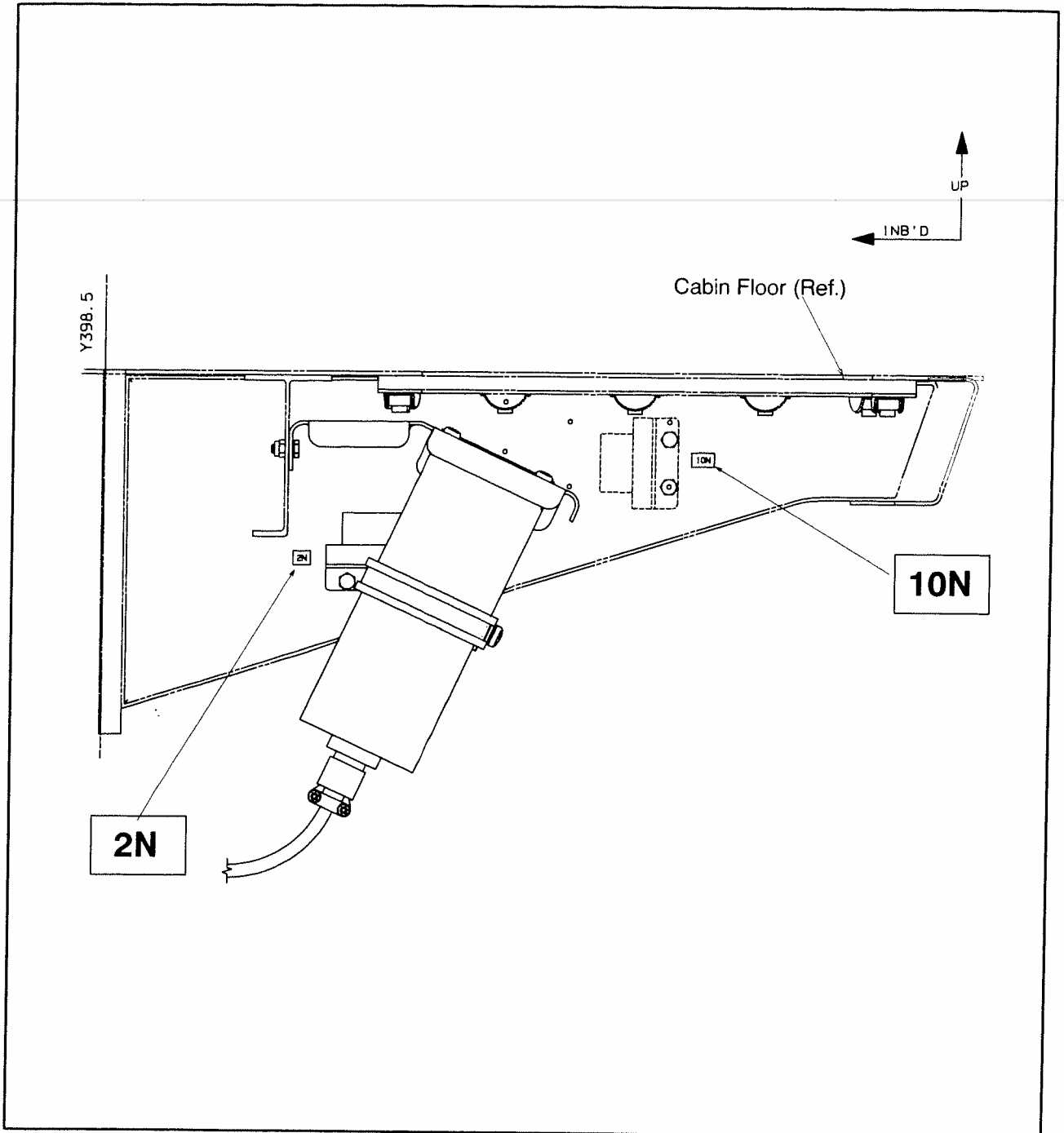


Figure 21 Placards on RHS bulkhead with Floor-Mounted Torque Indicator Option
(Aircraft with Floor Seat Rail Support shown)

Transport Canada Accepted