

2699, 5<sup>e</sup> Avenue, Local 14, Shawinigan, Qc, Canada G9T 2P7 Telephone (819) 533-5788 Fax (819) 533-3494

CAGE CODE 3AR20

DK-582-ISI-001 Rev. 4

# Installation Instructions Robinson R22 & R44 Helicopter Floor Protectors

2022-11-02

#### PROPRIETARY RIGHT

This document or an embodiment of it in any media, discloses information, which is proprietary, and may contain controlled technical data that may not be transferred or exported without prior written approval of Delastek Inc. This document is an unpublished work protected under applicable copyright laws, and is delivered on the express condition that it is not to be used, disclosed, or reproduced, in whole or in part (including reproduction as a derivative work), or used for manufacture for anyone other than Delastek Inc without its written consent, and that no right is granted to disclose, or so use any information contained therein. All rights reserved. Any act in violation of applicable law may result in civil and criminal penalties.

L'innovation en tête DELAST Mastering	Innovation	Report No.: _ Revision: _ Date: _	DK-582-ISI-001 4 2022-11-02
	APPROVAL / SIGNAT	URE	
Prepared:	Ricardo Leonel Murguia Mechanical Engineering Technician	Date: <u>2022</u>	-01-12
Checked:	Stéphane Héroux, Eng. Mechanical Engineer	Date: <u>2022</u>	-01-12
Approved:	Stéphane Héroux, Eng. Mechanical Engineer	Date: <u>2022</u>	-01-12



Report No.: \_ Revision: \_ Date: DK-582-ISI-001

4 2022-11-02

REVISION LOG					
REV.	DATE	REVISED BY	APPROVED BY	PAGES AFFECTED	REMARKS
NC	2006-03-11		DAR 310	All	Initial release
1	2022-01-12	Ricardo Leonel Murguia	S. Héroux, Eng.	All	See explanation Below
2	2022-01-28	Ricardo Leonel Murguia	S. Héroux, Eng.	All	See explanation Below
3	2022-04-08	Ricardo Leonel Murguia	S. Héroux, Eng.	14	See explanation Below
4	2022-11-02	Thierry Fokam	R&D 22	10, 11, 12, 13	Figure 1, Figure 2, Table 2 and Table 3 updated

## **Revision NC:**

Initial Installation Instructions prepared by Helico design in 2006-03-11 Report: ISI-R-22/44-1000 REV NC available in Delastek archive.

## **Revision 1:**

The STC Holder changed. Was Helico Design. Now is Delastek.

## Revision 2:

The document name changes form ISI-R-22/44-1000 to DK-582-ISI-001 The template changes to conform to Delastek standards.

## **Revision 3:**

The installation weight for the complete kits changes. Was 3 Lb for R44 and 1.5 Lbs for R22. Now is 3.3 Lbs for R44 and 1.7 Lbs for R22.



Report No.: DK-582 Revision: \_\_\_\_\_\_ Date: 2022

DK-582-ISI-001 4

2022-11-02

## TABLE OF CONTENTS

1	IRODUCTION	6
1.1 1.2 1.3	PURPOSE OF THE DOCUMENT General Applicability	6
2	PLICABLE DOCUMENTS	8
2.1 2.2	DELASTEK DOCUMENTS	8
2.2	GOVERNMENT AND OTHER DOCUMENTS	ð
3	STALLATION INSTRUCTIONS	. 9
3.1 3.2	INITIAL AIRCRAFT PREPARATION INSTALLATION OF FLOOR PROTECTORS	9 9
3.3 3.4	WEIGHT & BALANCE AMENDMENT INSPECTION & MAINTENANCE	14



Report No.: DK-5 Revision: \_\_\_\_\_ Date: 202

DK-582-ISI-001 4

2022-11-02

#### LIST OF TABLES

Table 1 - Applicability	7
Table 2 - ROBINSON R22 FLOOR PROTECTORS INSTALLATION Part List	11
Table 3 - ROBINSON R44 FLOOR PROTECTORS INSTALLATION Part List	13
Table 4 - Longitudinal Center of Gravity	14

#### LIST OF FIGURES

## LIST OF ABBREVIATION AND ACRONYMS

- FAA: Federal Aviation Administration
- L/H: Left-hand
- R/H Right-hand
- STC: Supplemental Type Certificate
- TCCA: Transport Canada
- TCDS: Type Certificate Data Sheet
- TEL: Telephone



Report No.:	DK-582-ISI-001
Revision:	4
Date:	2022-11-02

# 1 INTRODUCTION

# 1.1 PURPOSE OF THE DOCUMENT

The purpose of this document is to describe the method to install the Delastek Floor Protectors in helicopters Robinson R22 and R44

## 1.2 General

The Delastek Floor Protection system is made of molded LEXAN, a polycarbonate sheet widely used in aerospace applications. This material combines high-impact performance with good stiffness over a wide range of temperature of -40°F up 200°F. Its high durability will provide superior protection to your Robinson helicopter. Any question regarding the Delastek floor protection system shall be directed to:

DELASTEK Customer Support 2699 5e Avenue, Local 14 Shawinigan, Qc, Canada G9T 2P7

TEL: (819) 533-5788 FAX: (819) 533-3494



Report No.:	DK-5
Revision:	
Date:	20

DK-582-ISI-001 4

2022-11-02

# 1.3 Applicability

This installation instruction applies to the following Robinson Helicopters:

A/C Model	Ser #	TCDS
R22	0002 thru 0300 0302 thru 0349 0352 thru 0356	H10WE Rev 17 2020-10-30
R22 Alpha	0301, 0350, 0351 0357 thru 0500, excluding 0364	H10WE Rev 17 2020-10-30
R22 Beta	0501 and subsequent	H10WE Rev 17 2020-10-30
R22 Mariner	0364,0501 and subsequent (Suffix "M" added to all Mariners)	H10WE Rev 17 2020-10-30
R44	002, 0004 thru 9999 except 1140, 30001 and subsequent.	H11NM Rev 10 2020-10-06
R44 II	1140, 10001 thru 29999.	H11NM Rev 10 2020-10-06

# Table 1 - Applicability



Report No.:	DK-582-ISI-001
Revision:	4
Date:	2022-11-02

# 2 APPLICABLE DOCUMENTS

This section lists the related documents.

## 2.1 Delastek Documents

 DK-582-010
 ROBINSON R44 FLOOR PROTECTORS INSTALLATION Drawing
 DK-582-020
 ROBINSON R22 FLOOR PROTECTORS INSTALLATION Drawing

## 2.2 Government and Other Documents

TCDS H10WE	FAA, TYPE CERTIFICATE DATA SHEET Robinson R22, R22 ALPHA, R22 BETA, R22 MARINER, REVISION 17 2020-10-30
TCDS H11NM	FAA, TYPE CERTIFICATE DATA SHEET Robinson R44 and R44 II, REVISION 10 2020-10-06
TCDS H97	TCCA, TYPE CERTIFICATE DATA SHEET Robinson R44 and R44 II, Issue no 8 2017-05-18
<ul> <li>R22 Maintenance Manual</li> </ul>	R22 Maintenance Manual and Instructions for Continued Airworthiness
<ul> <li>R44 Maintenance Manual</li> </ul>	R44 Maintenance Manual and Instructions for Continued Airworthiness



Report No.:	DK-582-ISI-001
Revision:	4
Date:	2022-11-02

#### INSTALLATION INSTRUCTIONS 3

# 3.1 Initial Aircraft Preparation

- Ensure the rotorcraft is safe for maintenance;
- Clean up the helicopter floor and carpet and ensure that all carpets are free for visible dirt:
- Clean the helicopter L/H and R/H middle console in the pedal areas to remove any dirt and grease.

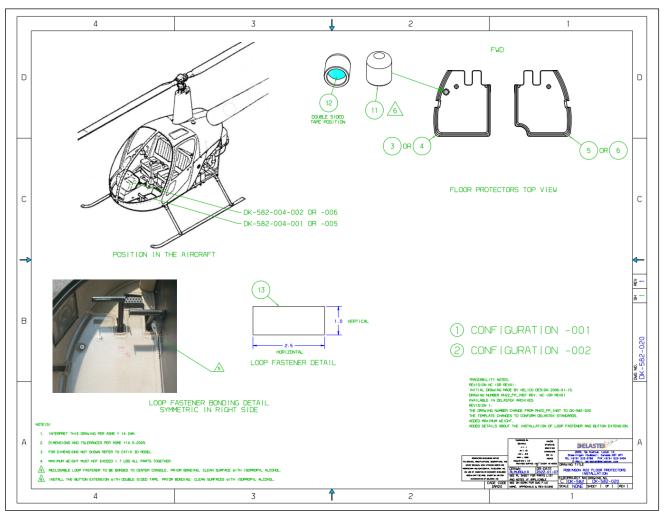
# 3.2 Installation of Floor Protectors

- Clean each side of the forward lower portion of the center console side wall with isopropyl alcohol. Refer to Robinson floor protectors' installation drawings below.
- Bond the loop fasteners as indicated in the installation drawings below.
- Unpack floor protectors; ensure that all floor protectors are free from visible damage or cracks.
- Install each floor protector on proper side as shown in installation drawings below.
- Install the button extension with double sided tape. Prior bonding, clean surfaces with isopropyl alcohol.
- Ensure the floor protectors are properly secured.



Report No.:	DK-582-ISI-001
Revision:	4
Date:	2022-11-02

## Figure 1 - ROBINSON R22 FLOOR PROTECTORS INSTALLATION Drawing





Report No.:	DK-582-ISI-001
Revision:	4
Date:	2022-11-02

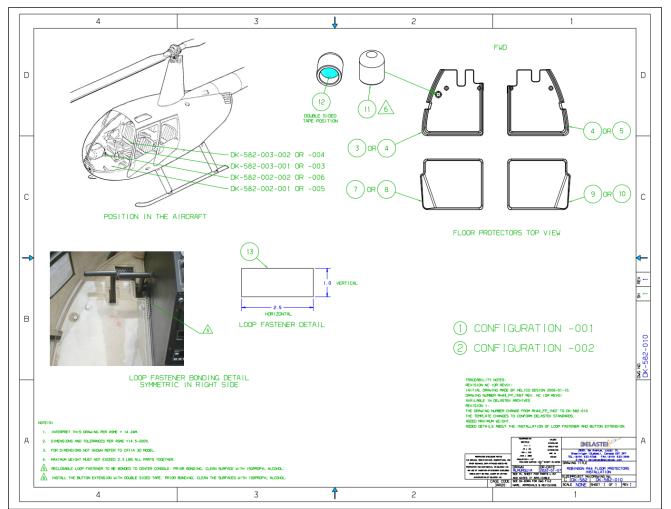
# Table 2 - ROBINSON R22 FLOOR PROTECTORS INSTALLATION Part List

2699, 5e Avenue, Local 14,					DRAWN BY: SHEET RLMURGUIA 1 OF 1	PL DK-582-020 1		
					TITLE			
Shewinigen (Oudeec), Canede 097 2P7 TEL:(819) 533-5788 FAX:(819) 533-3494 E-Meil: delastek@delastek.com				AX:(819) 533-3494	ROBINSON R22 FLOOR PROTECTORS INSTALLATION			
				Jeraslek, cull	CAGE CODE: 3AR20			
		FIND ZONE NO. SHEET			DESCRIPTION	MATERIAL SPEC		
				FOR EARLIER DRAWING SEE RH22_FP_INS	T REV. NC (OR REVO)			
	$\checkmark$	1		DK-582-020-001	ROBINSON R22 FLOOR PROTECTORS INSTALLAT	ION		
/								
	1	3		DK-582-004-001	LH FWD FLOOR PROTECTO FOR ROBINSON R22 ASSY CL	EAR		
1		5		DK-582-004-002	RH FWD FLOOR PROTECTO FOR ROBINSON R22 ASSY CLI	EAR		
	1	11		DK-582-005-001	INTERCOM BUTTON EXTENSION FOR ROBINSON HELICOP	TER ALUMINUM 6061-T6		
	AR	12		AIRHOLD 1 CBS	DOUBLE-BACKED HOLDING TAPE	AIRTECH AIRHOLD 1 CBS		
AR	AR	13		SJ3518FR	FLAME RESISTANT LOOP FASTENER	3M SJ3518FR		
		2		DK-582-020-002	ROBINSON R22 FLOOR PROTECTORS INSTALLAT	ION		
/								
	1	4		DK-582-004-005	LH FWD FLOOR PROTECTO FOR ROBINSON R22 AS	SY		
1		6		DK-582-004-006	RH FWD FLOOR PROTECTO FOR ROBINSON R22 AS	iSY		
	1	11		DK-582-005-001	NTERCOM BUTTON EXTENSION FOR ROBINSON HELICO	PTER ALUMINUM 6061-T6		
	AR	12		AIRHOLD 1 CBS	DOUBLE-BACKED HOLDING TAPE	AIRTECH AIRHOLD 1 CBS		
AR	AR	13		SJ3518FR	FLAME RESISTANT LOOP FASTENER	3M SJ3518FR		



Report No.:	DK-582-ISI-001		
Revision:	4		
Date:	2022-11-02		

## Figure 2 - ROBINSON R44 FLOOR PROTECTORS INSTALLATION Drawing





Report No.:	DK-582-ISI-001		
Revision:	4		
Date:	2022-11-02		

# Table 3 - ROBINSON R44 FLOOR PROTECTORS INSTALLATION Part List

2699, 56 Avenue, Local 14. Sowingon (Oudbec), Canada 091 297 TEL:(819) 533-5788 FAX:(819) 533-3494 E-Weil: delastekadolastek.com					DRAWN BY: RLMURGUIA	SHEET 1 OF 1		PL DK-582-010 1
					TITLE ROBINSON R44 FLOOR PROTECTORS INSTALLATION			
	REQ'D				CAGE CODE: 3AR20			
	PER FIND ZONE PART, DASH OR		DESCRIPTION	DESCRIPTION		MATERIAL SPEC		
				FOR EARLIER DRAWING SEE RH44_FP_INST	REV. NC (OR REVO)			
		1		DK-582-010-001	ROBINSON R44 FLOOR PROTECTORS			
/	$\vdash$			0K-382-010-001	AUBTINSUN R44 TEUDR PROTECTORS	INSTALLAT		
-	1	3		DK-582-002-001	LH FWD FLOOR PROTECTO FOR ROBINSON	R44 ASSY CLE	AR	
1		5		DK-582-002-002	RH FWD FLOOR PROTECTO FOR ROBINSON	R44 ASSY CLE	AR	
	1	7		DK-582-003-001	LH AFT FLOOR PROTECTO FOR ROBINSON	R44 CLEAR	L	EXAN 9604 0,06" THK
1		9		DK-582-003-002	RH AFT FLOOR PROTECTO FOR ROBINSON R44 CLEAR			EXAN 9604 0.06" THK
	1	11		DK-582-005-001	INTERCOM BUTTON EXTENSION FOR ROBIN	ISON HELICOPT	ER A	LUMINUM 6061-T6
	AR	12		AIRHOLD 1 CBS	DOUBLE-BACKED HOLDING TAPE		P	IRTECH AIRHOLD 1 CBS
AR	AR	13		SJ3518FR	FLAME RESISTANT LOOP FASTENER		3	M SJ3518FR
		2		DK-582-010-002	ROBINSON R44 FLOOR PROTECTORS	INSTALLAT	ION	
_	1	4		DK-582-002-005	LH FWD FLOOR PROTECTO FOR ROBINSON	RAA ASSY	_	
1	<u> </u>	6		DK-582-002-006	RH FWD FLOOR PROTECTO FOR ROBINSON		-	
	1	8		DK-582-003-003	LH AFT FLOOR PROTECTO FOR ROBINSON			EXAN F6000 SERIES .06"THK ANY COLOR
1		10		DK-582-003-004	RH AFT FLOOR PROTECTO FOR ROBINSON	R44	u	EXAN F6000 SERIES .06"THK ANY COLOR
	1	11		DK-582-005-001	INTERCOM BUTTON EXTENSION FOR ROBIN	SON HELICOPT	ER A	LUMINUM 6061-T6
	AR	12		AIRHOLD 1 CBS	DOUBLE-BACKED HOLDING TAPE	E	P	IRTECH AIRHOLD 1 CBS
AR	AR	13		SJ3518FR	FLAME RESISTANT LOOP FASTE	ENER	3	M SJ3518FR
							+	



Report No.:	DK-582-ISI-001	
Revision:	4	
Date:	2022-11-02	

# 3.3 Weight & Balance Amendment

• Update as required, the aircraft's empty weight and balance data to reflect the floor protectors installation.

#### Table 4 - Longitudinal Center of Gravity.

Component	Weight (lbs)	Arm X (in)	Moment (in-lbs)
R22 FULL KIT	1.7	70.0	119.0
INSTALL			

Component	Weight (lbs)	Arm X (in)	Moment (in-lbs)		
R44 FULL KIT	3.3	49.5	163.4		
INSTALL					

• Lateral Center of Gravity variation is negligible.

## 3.4 Inspection & Maintenance

- Before Each flight:
  - Before each flight the floor protector shall be visually inspected to ensure adequate positioning.
- Annual Inspection:
  - Combined with the rotorcraft annual inspection the floor protector shall be inspected for general condition and damage.
- Allowable Damage:
  - Wear scratches are acceptable until considered esthetically unacceptable.
  - Any thought the thickness cracks are unacceptable. Unit replacement is required.
- Cleaning:
  - The Delastek Floor Protectors can be cleaned as required using a mild soap and a nonabrasive cloth.