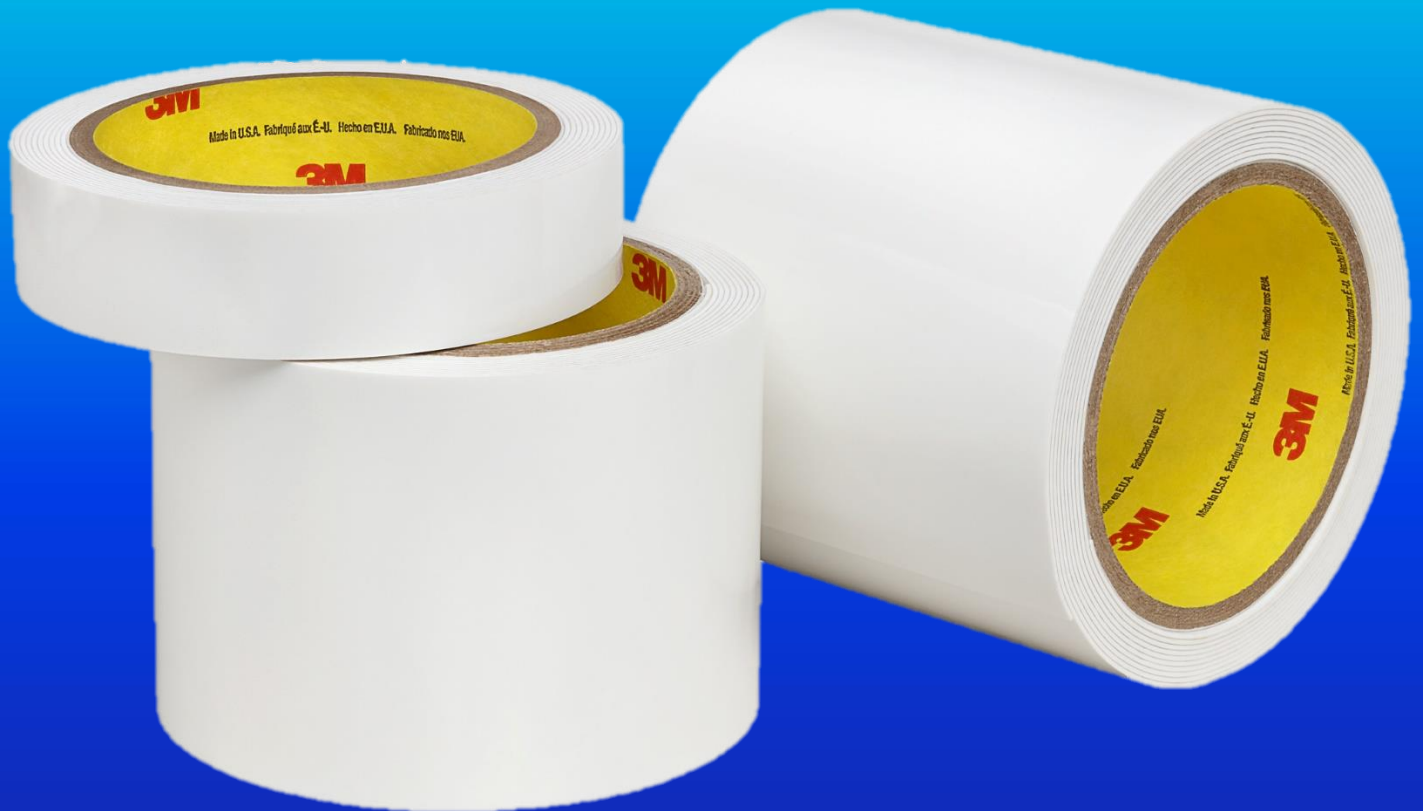


# 3M™ Corrosion Prevention Sealing Tape 9143FR Installation, Maintenance, and Removal Instructions



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# 1.0 Introduction

## 1.1 Document Scope

This document provides supplemental information and instructions regarding material definition, part installation, damaged part criteria and actions, part removal, and part replacement for 3M™ Corrosion Prevention Sealing Tape 9143FR (9143FR).

The purpose of these Instructions is to provide the owner/operator with the information necessary to ensure proper installation and maintenance of 9143FR. These instructions supplement 3M document number ICA-001141, *Instructions for Continued Airworthiness, 3M™ Corrosion Prevention Sealing Tape 9143FR*.

**Note:** These Instructions and ICA-001141 should be placed in the airplane operator's maintenance manual and incorporated into the operator's scheduled maintenance program.

## 1.2 Purpose/ Rationale for Installation

Aircraft passenger and cargo compartment floor panel metallic support structures, crease beams and door thresholds [hereinafter collectively referred to as structure(s)] are susceptible to corrosion with repeated exposure to various fluids, particularly around doors, galleys, lavatories, and in cargo compartments.

Severe corrosion can result in these structures requiring replacement during heavy check maintenance operations. 3M™ Corrosion Prevention Sealing Tape 9143FR is used to seal the structure surfaces, protecting the integrity of their corrosion inhibiting coatings.

## 1.3 Program for the Distribution of Changes to These Instructions

Significant changes to these Instructions are envisioned only in the event of a change to the components that comprise the sealing tape which results in modification of any of the guidance in this document. In the case of significant changes, the latest version of the Instructions will be distributed directly to the airplane owner/operator in hard copy and/or electronic format upon completion of the changes.

For minor typographical or grammatical changes where no functional or operational characteristics are affected, no notice of change will be made.

## 1.4 Warnings, Cautions, and Notes

Warnings, cautions, and notes may be used throughout this manual to emphasize important and critical instructions as follows:

**WARNING**

**AN OPERATING PROCEDURE, PRACTICE, ETC., WHICH, IF NOT CORRECTLY FOLLOWED, COULD RESULT IN PERSONAL INJURY OR LOSS OF LIFE**

**CAUTION**

**AN OPERATING, PROCEDURE, PRACTICE, ETC. WHICH, IF NOT STRICTLY OBSERVED, COULD RESULT IN DAMAGE TO, OR DESTRUCTION OF EQUIPMENT**

**Note**

An operating procedure, condition, etc., which is essential to highlight

## 1.5 Material Definition

9143FR is a 0.043 inch thick tape comprised of a polyester backing with a flame retardant acrylic adhesive. It is sold in roll format in a variety of different widths to match the widths of typical floor panel metallic support structures used in aircraft manufacture.

## 2.0 Part Fabrication

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**NOT APPLICABLE** – This section is not applicable as 9143FR is provided in roll form and does not need additional fabrication.

## 3.0 Part Installation

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To maximize the effectiveness and longevity of 9143FR, the tape should be installed without wrinkles, blisters, or other contaminants in the bond line (area of contact between the floor panel support structure surfaces and the tape adhesive), and without excessive abrasion, scuffing, or cuts to the tape surface.

Please follow the instructions contained in this document and other applicable instructional documentation (such as technical data sheets, installation videos, service bulletins, etc.).

Please contact your 3M engineering representative prior to installation if clarification is required.

**Note:** When installing 9143FR, it is important not to contaminate the surface of the substrate (floor panel support structures) or the adhesive on the tape. Use of clean, silicone-free and dust-free gloves and appropriate personal protective equipment is recommended.

### 3.1 Safety Notes

**Note:** Before handling any chemical products used for cleaning and installation of the sealing tape, always read the container label and the Safety Data Sheet (SDS).

**Note:** When using solvents, extinguish all ignition sources, including pilot lights. Read and follow manufacturer's warnings and directions for use.

**Note:** Local air quality regulations may regulate or prohibit the use of surface preparation and cleaning materials based on solvent (VOC) content.

## 3.2 Surface Preparation

The primer or topcoat on the floor panel support structures surface must be in good condition before 9143FR is installed. The surface must be smooth without dirt, heavy oxidation, chips, coating delamination, or “nibs”. Surface coating that has chips or other defects should be repaired per the applicable aircraft maintenance manual. If the coating is too damaged, recoat the area per manufacturer guidelines.

**Note:** Primer or topcoat should be allowed to cure or dry per the manufacturer recommendations prior to application of 9143FR.

Remove existing clip nuts and ensure the primer or topcoat is thoroughly clean using isopropanol or other approved cleaning solvent per applicable aircraft maintenance manual.

## 3.3 Tape Application

Carefully unwind the roll of 9143FR and place the tacky side of the tape onto the floor panel support structure surfaces. Using a squeegee, press down on the tape as it is unwound down the length of the support structure. The squeegee will help to prevent air bubbles from being trapped under the tape. If necessary, cut the tape to length using scissors.

**Note:** For maximum effectiveness, handle the roll of 9143FR on the edges and in the core, minimizing contact with the tacky, adhesive surface.

### **CAUTION**

**WHEN USING SCISSORS OR OTHER CUTTING TOOLS, TAKE EXTREME CAUTION NOT TO SCORE, CUT, OR OTHERWISE DAMAGE THE COATING OR THE STRUCTURE SURFACE**

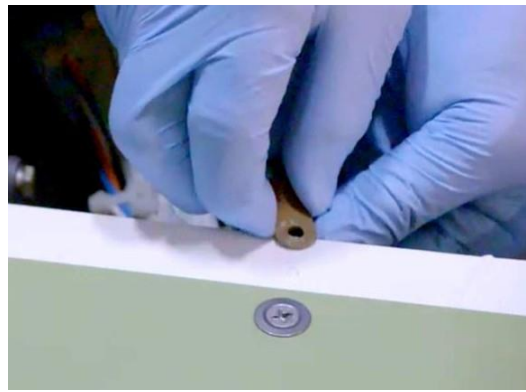
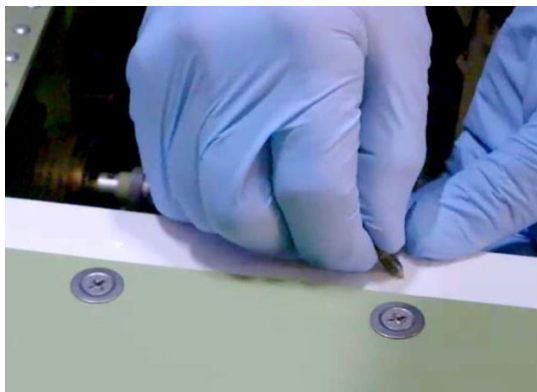
If bubbles are observed under the tape or the tape is misaligned during installation, lift the tape and pull back to that point, and reinstall the tape with the squeegee. Take care not to trap debris under the tape or otherwise damage the floor beam coating while repositioning.

When installing consecutive or adjoining pieces of tape, ensure the tape sections are butted tightly together and the installation results in no gaps between the tape sections. See example image below.



### 3.4 Floor Panel Installation

After 9143FR has been adhered to the floor panel support structure, locate holes in the support structure and use a pointed screw or approved tool to puncture a hole through 9143FR. Re-apply a clip nut over the punctured hole (see images below), ensuring the flange pinches the tape and the support structure. Place the specified floor panel on top of the 9143FR, aligning the holes with the clip nuts. Place the fastener or screw in the hole and install the fastener per the applicable maintenance instructions. Tapered or pointed screws (per manufacturer's specifications) work best.



**Note:** For maximum effectiveness, install clip nuts over the tape (or per maintenance manual instructions).

## 4.0 Maintenance Instructions

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### 4.1 Scheduling Information

9143FR does not require periodic inspection, cleaning, adjustment, test, etc. to maintain its continued airworthiness. Replacement may occur as determined necessary during the course of ordinary airplane maintenance activities.

### 4.2 Recommended Overhaul Periods

As with any product, environmental factors, age and use affect the materials and performance of 9143FR. Typically, the manufacturer recommends replacing 9143FR at approximately 6 (six) year intervals. Use in harsh environments may necessitate more frequent replacement.

This replacement interval, however, is optional, at the owner/operator's discretion, and is in no way mandatory as a means to achieve the continued operational safety of the airplane.

### 4.3 Inspection Program

**NOT APPLICABLE** – This section is not applicable as 9143FR does not require a periodic inspection to maintain its continued airworthiness.

## 5.0 Troubleshooting / Damaged Part Criteria

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### 5.1 Damage Types and Actions

Recommendations for use of 9143FR with any of the damage types below prior to and during installation.

**Torn / cut / punctured tape** - If there is a tear, cut, or puncture in the roll of tape this area should be removed and discarded. If the damage extends through the roll, the entire roll should be replaced.

**Wrinkles** – If there is a wrinkle in the tape such that the tape film cannot be laid flat, e.g. the adhesive is adhered to itself or the PET film has a fold-over or inherent wrinkle, this would be considered a permanent deformation. If a permanent deformation exists in the tape, remove and discard this section of tape.

**Surface abrasions / scuff marks** - If the tape has abrasions, scratches, or scuff marks that do not wipe off, this section of tape should not be used and should be replaced.

**Waviness in adhesive** – If the adhesive surface appears to have wave-like features, the product can be used as-is. This surface feature is not expected to affect product performance. An example is shown in the image below.



The aircraft owner/operator should make the final decision on accepting or rejecting a part. 3M Engineering Representatives will provide aid or guidance upon request.

## 6.0 Part Repair

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**Note:** Refer to applicable aircraft maintenance documentation for damage criteria and allowable repairs. If the instructions detailed herein contradict the applicable aircraft maintenance documentation, the aircraft maintenance documentation supersedes these instructions.

### 6.1 Damage Types and Actions

If 9143FR becomes damaged after tape installation but before floor panel installation, the damaged portion of 9143FR should be removed and a new section of 9143FR installed per the instructions in Section 3.0. Damage may include inadvertent tears, cuts, penetration through the polyester backing, or edge lifting and wrinkling due to objects or personnel dragging along the tape edge. New sections of tape should be installed with butt joints touching the ends of existing, installed 9143FR.

## 7.0 Part Removal Instructions

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9143FR should be removed whenever the floor panel in direct contact with the tape is removed. The tape should be peeled up at an angle of approximately 90°, working down the length of the floor panel support structure. If there is adhesive residue on the floor panel support structure, clean with isopropanol or other approved solvents per applicable aircraft maintenance instructions. Clean the floor panel support structure and install new 9143FR per the instructions in Section 3.0.

## 8.0 Part Replacement

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Replacement 9143FR (and the following items to assist in the installation of the tape) can be ordered directly from 3M approved distributors.

3M™ Aerospace PPT Applicator Squeegee, Yellow (3M ID 87330002301)

Please contact 3M customer service or visit [www.3M.com/Aerospace](http://www.3M.com/Aerospace) to obtain a list of authorized distributors (See Section 15.0).

## 9.0 Other General Procedural Instructions

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**NOT APPLICABLE** – This section is not applicable as 9143FR does not require system testing, symmetry checks, does not affect the center of gravity, lifting and shoring, nor storage limitations.

## 10.0 Tape Access

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9143FR is installed on floor panel support structures, underneath the floor panel. It can be accessed by removal of the floor panel.

## 11.0 Special Inspection Techniques

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**NOT APPLICABLE** – This section is not applicable as 9143FR does not require any special inspection techniques to determine suitability for continued use or replacement.

## 12.0 Protective Treatments

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**NOT APPLICABLE** – This section is not applicable as 9143FR does not require any protective treatments be applied to the aircraft due to its installation, maintenance, removal, or replacement.

## 13.0 Fasteners

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**NOT APPLICABLE** – This section is not applicable as 9143FR does not involve the use of fasteners to apply the tape.



## 14.0 Special Tools

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It is recommended that a 3M Aerospace Yellow Squeegee be used for the installation of 9143FR (See figure below and Sections 3.3, and 8.0).



3M Aerospace Yellow Squeegee

## 15.0 Manufacturer Contact Information

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Airplane owner/operators may contact the manufacturer at:

**3M Company**

3M Corporate Headquarters  
3M Center  
St. Paul, MN 55144-1000

3M Aerospace Customer Service  
1-800-235-2376 Call Monday - Friday  
8AM to 5PM Central Time

Website: [www.3M.com/Aerospace](http://www.3M.com/Aerospace)

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