ETS·LINDGREN®
An ESCO Technologies Company

Single Knife Edge (SKE)
Recessed Channel Mechanism (RCM) Door Maintenance Manual

100513 Rev D

September, 2024

Revision Record
MANUAL, SKE DOOR | Part # 100513 Rev D

Revision	Description	Date
A	Initial Release	April, 2002
B	Rebrand	August, 2013
C	Added E-Latch Replacement	October, 2018
D	Content updated	September, 2024

TABLE OF CONTENTS

NOTES, CAUTIONS, AND WARNINGS

	**Note:** Denotes helpful information intended to provide tips for better use of the product.
CAUTION	**CAUTION:** Denotes a hazard. Failure to follow instructions could result in minor personal injury and/or property damage. Included text gives proper procedures.
WARNING	**WARNING:** Denotes a hazard. Failure to follow instructions could result in **SEVERE** personal injury and/or property damage. Included text gives proper procedures.

See the ETS-Lindgren *Product Information Bulletin* for safety, regulatory, and other product marking information.

1.0 INTRODUCTION

Each **ETS-Lindgren Single Knife Edge™ (SKE) Recessed Channel Mechanism (RCM) Door** is manufactured to precise standards and tolerances and is designed for high performance and durability. This guide provides the steps to perform periodic maintenance that is intended to prevent a problem from occurring in the future, eliminate the need for costly repairs, and to avoid costly down time.

ETS-Lindgren Product Information Bulletin

See the ETS-Lindgren *Product Information Bulletin* included with your shipment for the following:

- Warranty information
- Safety, regulatory, and other product marking information
- Steps to receive your shipment
- Steps to return a component for service
- ETS-Lindgren calibration service
- ETS-Lindgren contact information

2.0 MAINTENANCE

CAUTION

Before performing any maintenance, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.

Maintenance of the SKE RCM Door is limited to the components described in this guide.

Warranty may be void if the instructions in this maintenance guide are not followed.

If you have any questions concerning maintenance, contact ETS-Lindgren Customer Service.

Replacement and Optional Parts

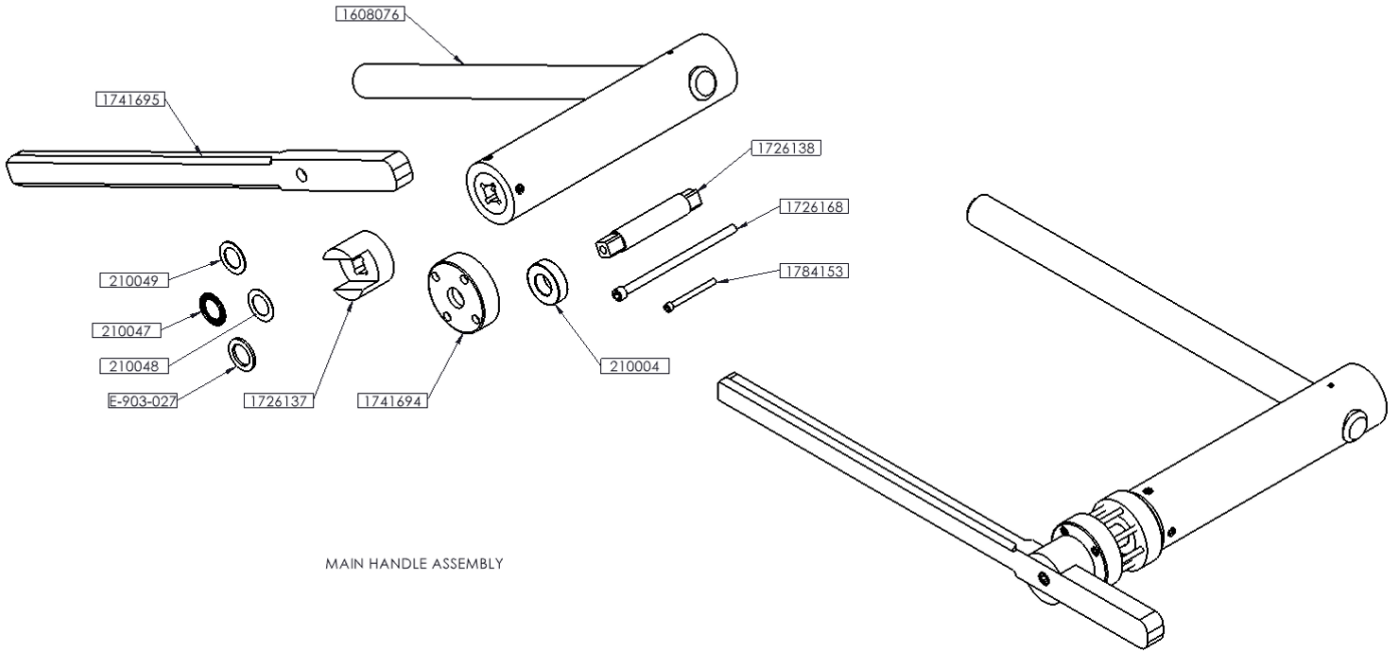
ETS-Lindgren may substitute a similar part or new part number with the same functionality for another part/part number. Contact ETS-Lindgren for questions about part numbers and ordering parts.

Following are the part numbers for ordering replacement or optional parts for the Single Knife Edge™ (SKE) Recessed Channel Mechanism (RCM) Door.

Maintenance Kit

Part Description	Part Number
SKE Door Maintenance Kit	206538

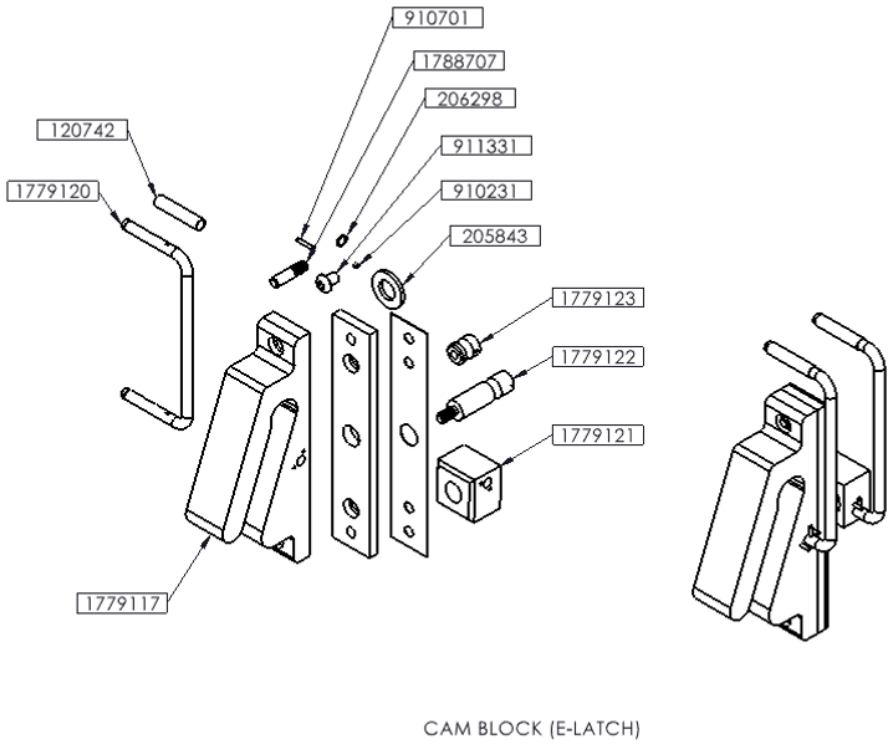
Main Handle Assembly



MAIN HANDLE ASSEMBLY

Part Description	Part Number
HANDLE, DR, PHENOLIC, 24-INCH, SPURVING	1608076
HANDLE	1741695
HANDLE SHAFT	1726138
SCREW,3/8-16 X 7,SH,CAP,GR8	1726168
SCR,1/4-20 X 2-3/4,SH,CAP,STL,BLK	1784153
WSHR,PRECISION .060	210049
BRG,PIN TORRINGTON #NTA1625	210047
WSHR,PRECISION .030	210048
BRG,DR SHAFT	210004
GASKET, EMI 1.062"ID,1.562"OD,0.125"THK	E-903-027
HUB,HANDLE, SKE/DKE UNI	1726137
RETAINER,BEARING,HDL,SKE/DKE UNI	1741694

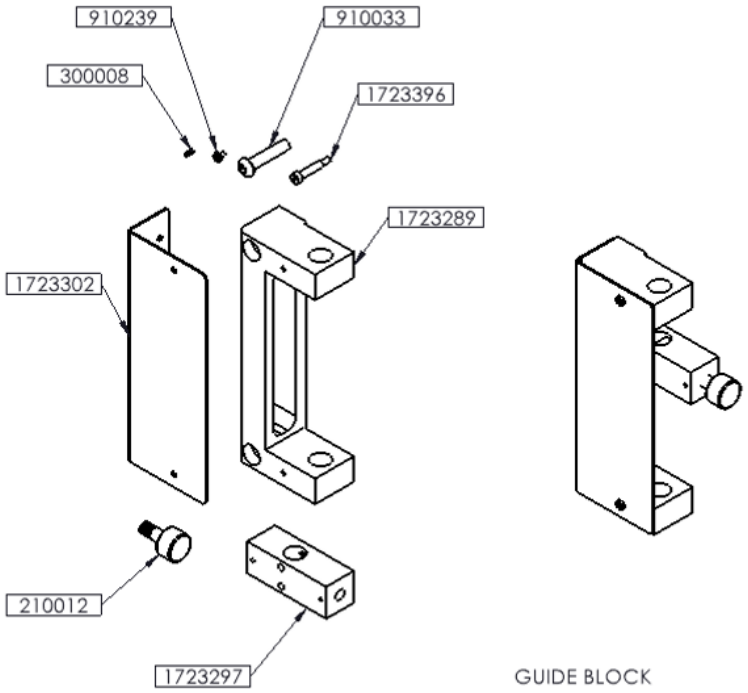
Cam Block (E-Latch)



CAM BLOCK (E-LATCH)

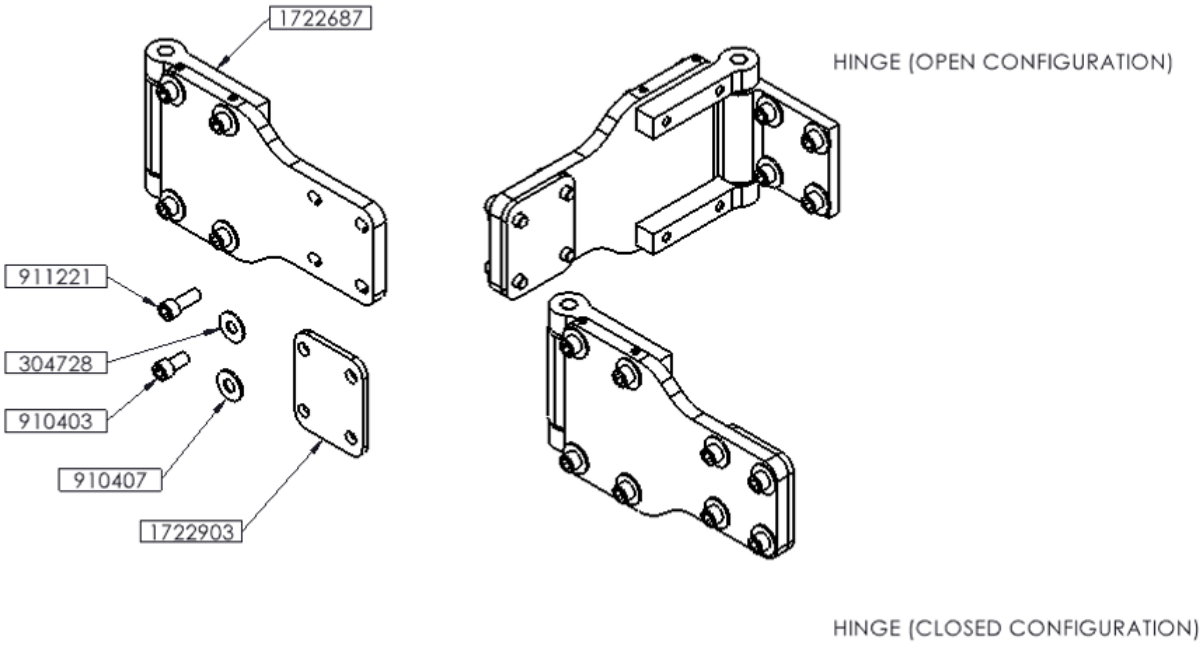
Part Description	Part Number
ROLL PIN,1/8 X 3/4,SS	910701
PIN,THRD,3/8"OD,3/8"-16,1.5"L,18-8 SS	1788707
RING,RET EXT 3/8"	206298
SHRINK TUBE, RED,S201	120742
SCREW,3/8-16 X 1/2",HEX,BUT,SS	911331
HANDLE,E-RELEASE,SKE/DKE UNI	1779120
SCREW,8-32 X 1/8,SH,SET,SS	910231
GSKT,MESH DONUT FOR HANDLE,S-201DOOR	205843
CATCH,E-RELEASE,SKE/DKE UNI	1779123
SHAFT,E-RELEASE,SKE/DKE UNI	1779122
BLOCK,RETAINING,E-RELEASE,SKE/DKE UNI	1779121
CAM BLOCK,SKE/DKE UNI	1779117

Guide Block



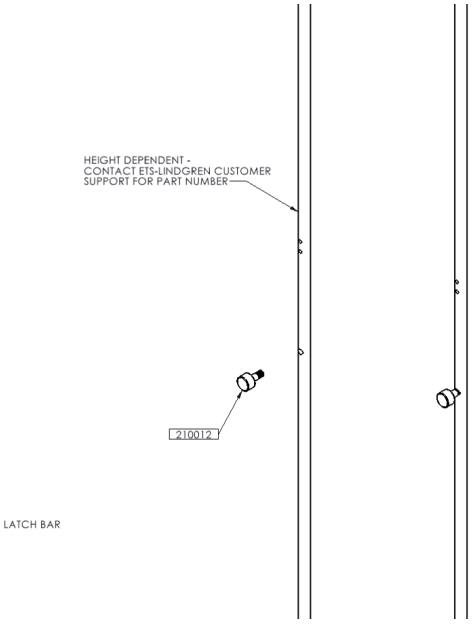
Part Description	Part Number
SCREW,8-32 X 1/4,PHIL,BIND,SS	910239
SCREW,3/8-16 X 1-3/4",HEX,BUT,SS	910033
SCR,#8-32X5/16,SET,HX	300008
SCREW,.25 X 1,SH,SHLD,GR8,10-24	1723396
GUIDE BLOCK,LATCH ROD,SKE/DKE UNI	1723289
CVR,GUIDE BLOCK,LATCH ROD,SKE/DKE UNI	1723302
BRG,CAMFLWR,SMITH#CR 1"(CTA31)	210012
CROSSBAR,ROLLER/LATCHING,SKE/DKE UNI	1723297

Hinge



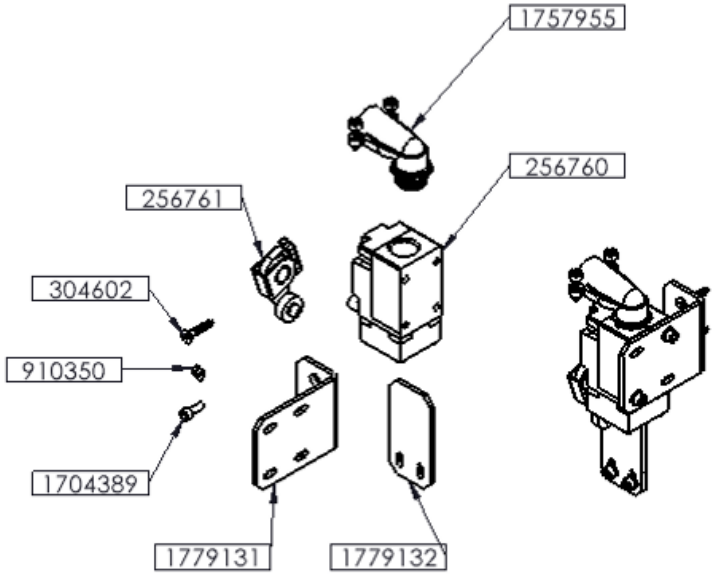
Part Description	Part Number
ASSY,HINGE,DOOR,SKE/DKE UNI	1722687
SCREW,3/8-16 X 1,SH,CAP,SS	911221
WSHR,3/8X1(OD),FLAT,STL,ZN	304728
SCREW,3/8-16 X 3/4,SH,CAP,SS	910403
SPACER,HINGE,SKE/DKE UNI	1722903

Latch Bar



Part Description	Part Number
BRG,CAMFLWR,SMITH#CR 1"(CTA31)	210012

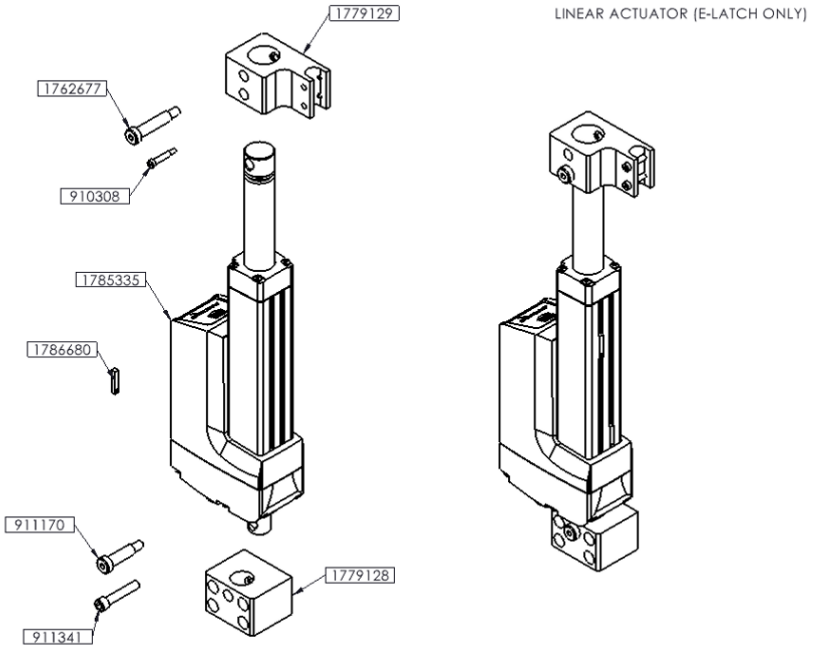
Limit Switch (E-Latch Only)



LIMIT SWITCH (E-LATCH ONLY)

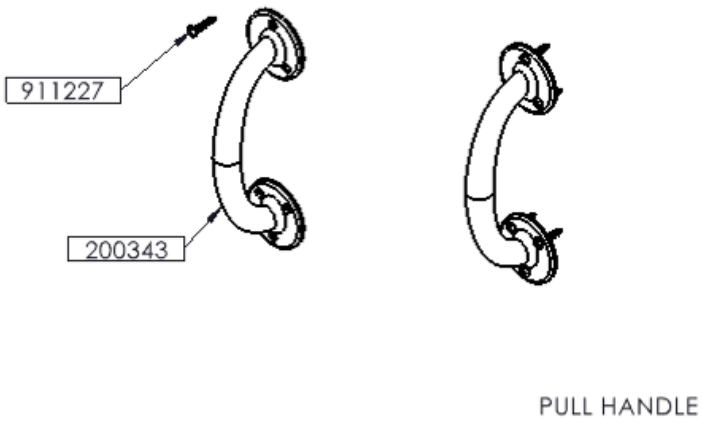
Part Description	Part Number
CONNECTOR,FLEX,1/2",SQUEEZE, 90 DEG	1757955
SWI,LIMIT SQUARE D	256760
LEVER ARM,SQUARE D,RA11	256761
SCR,#10X1FH,PH,STL,ZN,WOOD SCR*	304602
WASHER,#10,FLAT,SS	910350
SCREW,10-24 X 1/2,SH,CAP,SS	1704389
BRKT,LIMIT SWITCH,SKE/DKE UNI	1779131
STRIKE,LIMIT SWITCH,SKE/DKE UNI	1779132

Linear Actuator (E-Latch Only)



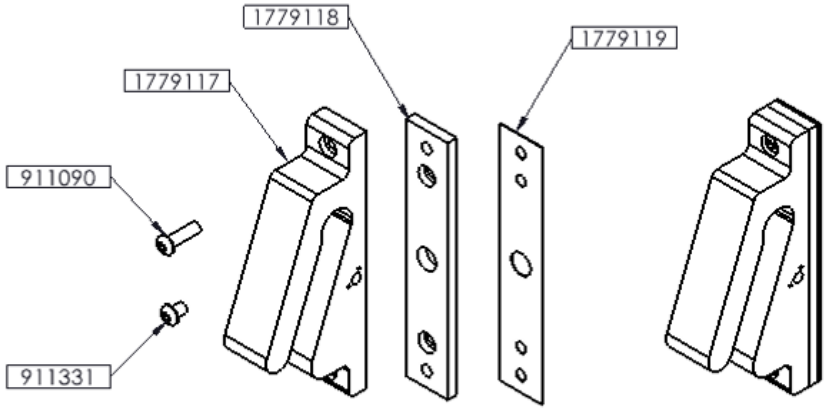
Part Description	Part Number
CLEVIS,LINEAR ACTUATOR,SKE/DKE UNI	1779129
SCREW,1/2 X 3,SH,SHLD,3/8-16	1762677
SCREW,1/4 X 1,SH,SHLD,SS,10-24	910308
ACTUATOR,LINEAR,24VDC, 4000N,150MMS	1785335
SWITCH,REED,THOMPSON #840-9132	1786680
SCREW,1/2 X 1-1/2,SH,SHLD,GR8,3/8-16	911170
ANCHOR,LINEAR ACTUATOR,SKE/DKE UNI	1779128
SCREW,3/8-16 X 2,SH,CAP,SS	911341

Pull Handle



Part Description	Part Number
SCREW,8-15,SM,PHIL,PAN,ZN	911227
DOOR PULL,ROCKWOOD 131 AL US28 FINISH	200343

Cam Block (Standard)



CAM BLOCK (STANDARD)

Part Description	Part Number
SPACER,CAM BLOCK,SKE/DKE UNI	1779118
SHIM,CAM BLOCK,SKE/DKE UNI,.03"	1779119
CAM BLOCK,SKE/DKE UNI	1779117
SCREW,3/8-16 X 1-1/4",HEX,BUT,SS	911090
SCREW,3/8-16 X 1/2",HEX,BUT,SS	911331

Service Procedures

For the steps to return a system or system component to ETS-Lindgren for service, see the *Product Information Bulletin* included with your shipment.

3.0 REGULAR MAINTENANCE SCHEDULE

CAUTION Before performing any maintenance, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.

CAUTION When working with solvents, always use eye protection and protective clothing, and make sure there is proper ventilation.

CAUTION Do not polish the brass or beryllium copper finger stock with steel wool, an electric sander, wire brush, or any abrasive material or device.

Do not polish the brass striking surfaces with any type of brass polish.

Do not apply floor wax to the door sill. Take care when waxing floors inside and outside the enclosure to avoid applying wax to the door sill or threshold.

Do not use an excessive amount of solvent. The contact fingers on the door are attached with adhesive. Any over-application of solvent other than as described in the following steps may disrupt the adhesive and cause the contact fingers to fall off.

If a source of clean, dry, oil-free air is available, it may be applied to speed drying time.

Required Tools and Supplies (Not Included)

CAUTION Use all cleaning agents in accordance with the manufacturer's instructions.

For Weekly Maintenance

- Clean, soft cloths
- Scour pads (example: 3M™ Scotch-Brite™ pad)
- Acetone or similar solvent

For Monthly Maintenance

- Clean, soft cloths
- 3-inch putty knife
- Acetone or similar solvent

For Six-Month Maintenance

- Clean, soft cloths
- Emery cloth sandpaper, 320 grit
- 3-inch putty knife
- Acetone or similar solvent
- 1/8 inch tempered Masonite or 3-inch piece of plastic sheet
- Light machine oil
- Lightweight grease

Weekly: Door Leaf Knife Blade

1. Use a scour pad to remove residue and clean the knife blade on the door leaf.
2. Clean the knife blade with a soft cloth soaked with acetone or similar solvent.
3. Lightly spray the knife edge with silicon lubricant.

Monthly: Receiver Channels

CAUTION Do not slide putty knife and cloth across finger stock when performing these steps.

1. Lightly dampen a clean, soft cloth with solvent.
2. Completely cover the blade portion of a 3-in putty knife.
3. To remove built-up dirt from the contact fingers, start at the top center of the door:
   - **For the upper and lower horizontal receiver channels—**Insert the putty knife with cloth into the receiver channel and work it towards a corner with an in-and-out motion; repeat in the opposite direction.
   - **For the vertical receiver channels—**Insert the putty knife with cloth into the top of the channel and work down to the bottom; repeat for the opposite channel.
4. Allow the solvent to evaporate, and then repeat the entire procedure.

Every Six Months: Fingers, Cams, Hinges, Handles

CAUTION

Do not move the sanding assembly side-to-side or up-and-down. The edges of the sanding paper will snag and damage the contact fingers.

Contact Fingers

1. Fold a piece of 320 grit emery cloth over a 3-in putty knife with the sanding surfaces facing out.
2. Slide the sanding assembly straight into and between the rows of contact fingers located in the knife edge receiver channel. With two or three strokes, burnish the surfaces of the contact fingers.
3. Move to the next section. With a 1/2-in overlap, repeat this procedure around the entire perimeter of the knife edge receiver channel. Be sure to burnish both rows of finger stock.
4. Remove residue with a soft cloth dampened with solvent and wrapped around a 3-in putty knife, as described in the **Monthly: Receiver Channels** section of this manual.

Roller Cams and Cam Blocks

Inspect the roller cams and cam blocks to confirm that a thin film of lubricant is present. If additional lubricant is required, apply a thin film of grease.

Door Handle / Spindle Assembly

CAUTION

The hinges and door handles are permanently lubricated and require no additional lubricant. Do not lubricate hinges or door handles.

Check periodically for any loose bolts and any wear or play on the door handle/spindle assembly.

Annually: Finger Stock

The necessity to replace finger stock varies, depending on environmental conditions and door use. For optimum RF performance, replace finger stock every one to two years.

(Optional) Replace the finger stock around the entire perimeter of the recessed contact mechanism (RCM). See Finger Stock Repair and Replace section of this manual for the steps to replace finger stock.

4.0 FINGER STOCK REPAIR AND REPLACEMENT

CAUTION

Before performing maintenance, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.

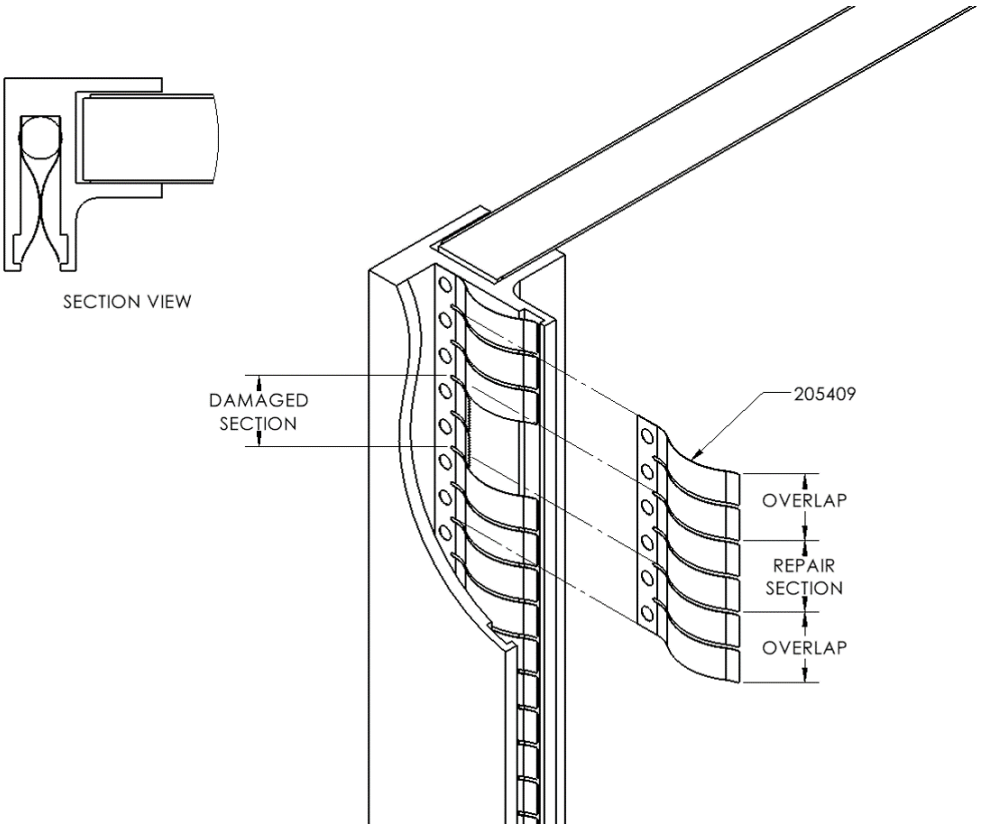
The necessity to replace finger stock varies, depending on environmental conditions and door use. For optimum RF performance, replace finger stock every 1-2 years.

Required Tools and Supplies (Not Included)

- Hex key
- Clean, soft cloths
- Scour pads (example: 3M™ Scotch-Brite™ pad)
- Acetone or similar solvent
- Emery cloth sand paper, 320 grit
- Cotton or surgical gloves
- Wide blade putty knife
- Heat gun

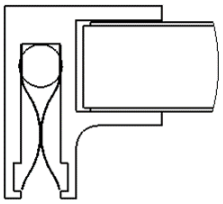
Replace Damaged or Broken Finger Stock

It is not necessary to remove the door to replace damaged or broken finger stock.

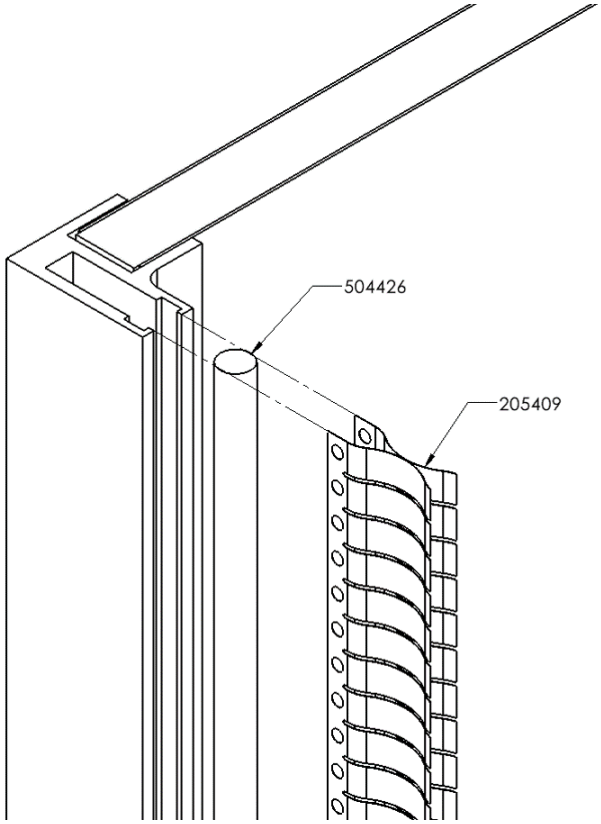


1. Remove broken or loose pieces with needle-nose pliers.
2. Cut a new section of finger stock to a length with at least two fingers overlapping on each end of the old finger stock.
3. Install the new finger stock by inserting it behind the damaged section.

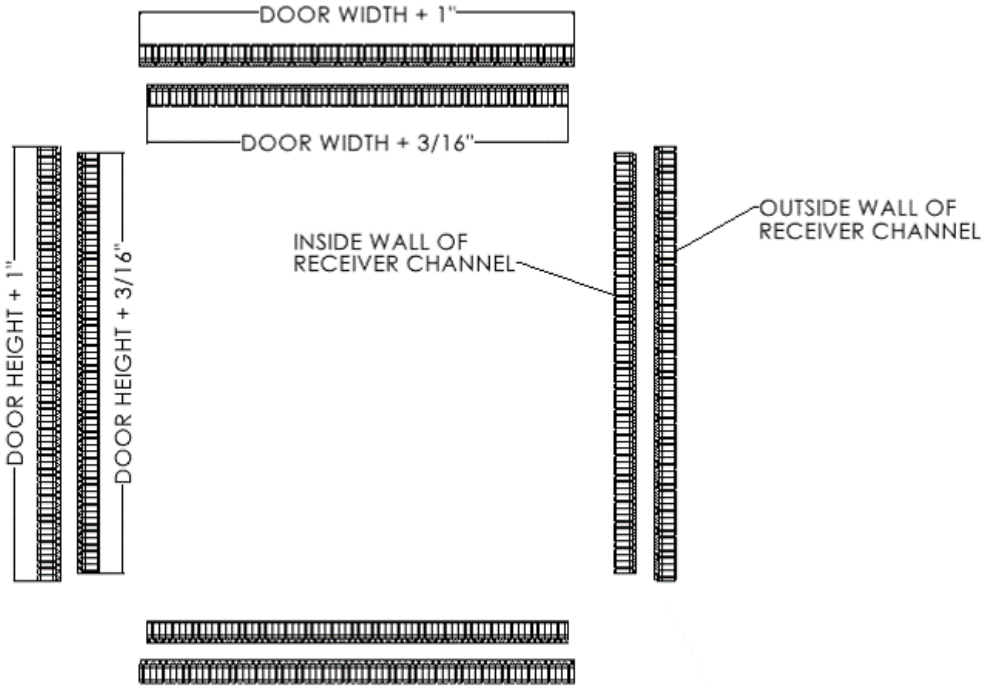
Replace All Finger Stock and Vinyl Seal



SECTION VIEW



1. Use needle-nose pliers to remove old finger stock and vinyl seal.
2. Clean receiver channel with abrasive pad.
3. Use a clean cloth dampened with cleaning agent to wipe the receiver channel clean.



4. Cut exact lengths of finger stock for each of the four sides of the channel.
5. Cut an exact length of vinyl seal for the entire perimeter of the door.
6. Install the first row of finger stock: Start in upper left corner and move down the entire side of the frame. Insert the second row of finger stock: Start in the upper left corner and move down the entire side of the frame. Gently press the fingers into position one at a time until they are locked in place.
7. Repeat step 6 for each of the remaining three sides of the channel.
8. Install the vinyl seal by inserting it into the channel opening: Start in the middle of the side of the frame and move around the frame so that the vinyl seal completely covers the finger stock.

CAUTION Carefully insert the vinyl seal behind one finger at a time.

9. Use the putty knife to gently push the vinyl seal between the two rows of finger stock and into final position at the base of the channel.

5.0 ACTIVATING AND REPLACING E-LATCH BLOCKS

CAUTION

Before performing maintenance, follow the safety information in the ETS-Lindgren *Product Information Bulletin* included with your shipment.

Activating E-Latch Blocks

The operation of the door is protected by means of a complete manual over-ride capability. It is possible to open the door in the event of loss of electrical power by means of three (3) (or more, if door model features more) emergency manual mechanisms.

For emergency release:

- Pull handle to a horizontal position and then toward the operator.
- It will disengage the block and handle from the door frame, enabling the door to be opened.
- This emergency system is operable from both sides of the door.

Re-installing E-Latch Blocks

Standard flat screwdriver required.

1. Slip the outer block with the red handle in the horizontal position over the pin that is extending out of the hole in the doorjamb.
2. Align the red handled lever rod with the groove that is in the emergency release pin.
3. Move it to the vertical position. This will lock the pin with the release handle.
4. Push the outer latch assembly flush with the jamb face as far as possible, and repeat the same procedure as explained in No. 1, (above) using the inside block assembly. If the latching assembly does not appear to be tight enough or so tight that it cannot be moved to the vertical (locked) position, readjust the slot end of the release pin.

Re-adjusting Pin Assembly

1. Pull the red handle on the inside of the room to a horizontal position. If the assembly is loose, use a standard flat screwdriver and turn the slot end of the pin ¼ turn clockwise and move the red handle to the locked position.
2. If the assembly is still loose, repeat the above operation.
3. If the latching assembly is too tight and will not latch, repeat the same procedure but turn the slot counter-clockwise ¼ turn at a time until the assembly is firmly in position.

Do not over tighten the assembly or use excessive force to latch the red lever into the assembly; this will damage the assembly.