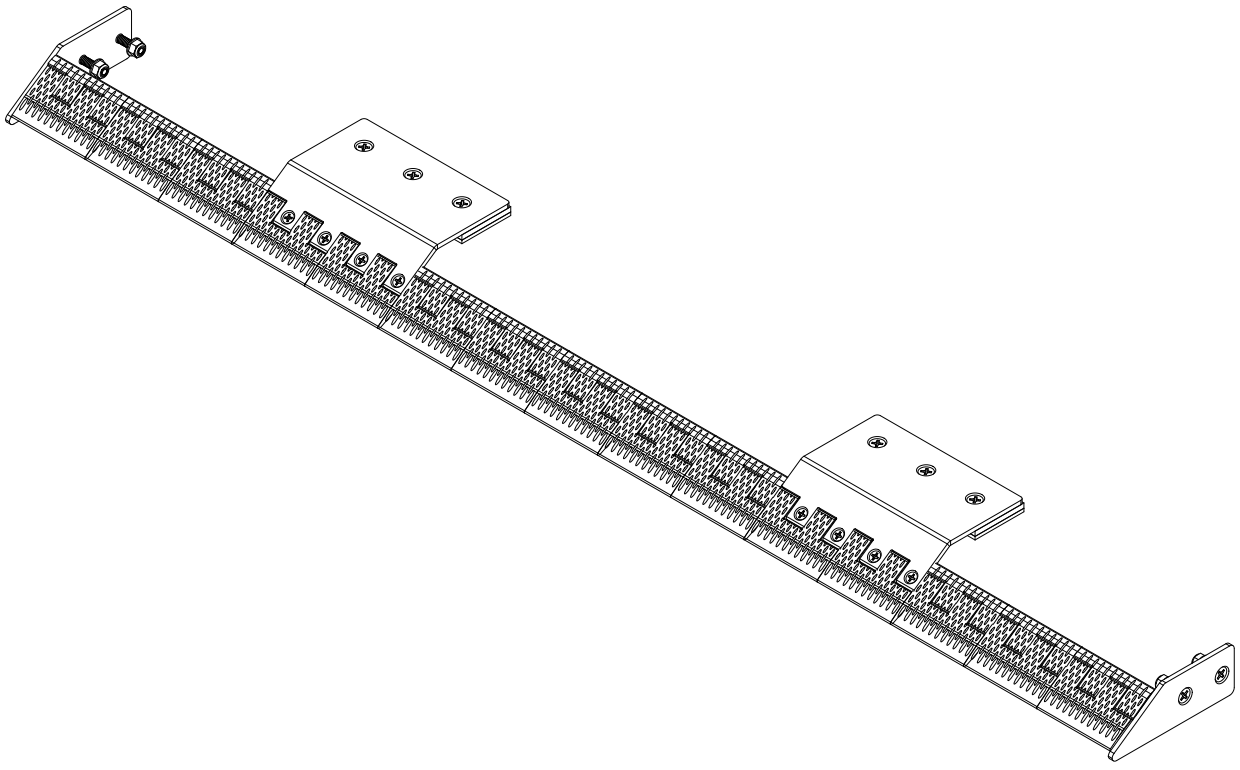
Baggage Handling Narrow Gap Segmented Transfer Plate (STP) 56270

Installation, Operation & Maintenance Manual



Patent Numbers: 9,663,306; 10,233,035; 10,556,755

FLEXCO

Baggage Handling Narrow Gap Segmented Transfer Plate

Ordering Number: _____

Installation Date: _____

Purchase Date: _____

Purchased From: _____

This information will be helpful for any future inquiries or questions
about Baggage Handling Narrow Gap Segmented Transfer Plate replacement parts,
specifications, or troubleshooting.

Table of Contents

Section 1 – Important Information

1.1 Introduction

We at Flexco are very pleased that you have selected the Baggage Handling Narrow Gap Segmented Transfer Plate (STP) for your conveyor system.

This manual will help you to understand the operation of this product and assist you in making it perform to its maximum efficiency over its lifetime of service.

It is essential for safe and efficient operation that the information and guidelines presented here be properly understood and implemented. This manual will provide safety precautions, installation instructions, maintenance procedures, and troubleshooting tips.

If you have any questions or problems that are not covered in this manual, please visit our website or contact our Customer Service Department:

Customer Service in the United States and Canada: 1-800-541-8028

Customer Service outside the United States:
www.flexco.com/NA/EN/Flexco/Contact-Us/Regional-Offices.htm

Visit www.flexco.com for other Flexco locations and products.

Please read this manual thoroughly and pass it on to any others who will be directly responsible for installation, operation and maintenance of this STP. While we have tried to make the installation and service tasks as simple as possible, the Segmented Transfer Plate does require correct installation and regular inspections and adjustments to maintain top performance.

1.2 User Benefits

Correct installation and regular maintenance will provide the following benefits for your operation:

- Reduced conveyor downtime
- Reduced man-hour labor
- Lower maintenance costs
- Increased service life for the Baggage Handling conveyor components

1.3 Service Option

The Baggage Handling Narrow Gap Segmented Transfer Plate is designed to be easily installed and serviced by your on-site personnel. However, if you would prefer complete turn-key factory service, please contact your local Flexco Field Engineer or your Flexco Distributor.

2.1 Stationary Conveyors

Before installing and operating the Baggage Handling Narrow Gap Segmented Transfer Plate, it is important to review and understand the following safety information. There are set-up, maintenance, and operational activities involving both stationary and operating conveyors. Each case has a safety protocol.

The following activities are performed on stationary conveyors:

- Installation
- Tension adjustments
- Blade replacement
- Cleaning
- Repairs

⚠ DANGER

It is imperative that OSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the Segmented Transfer Plate caused by movement of the conveyor belt. Severe injury or death can result.

Before working:

- Lockout/Tagout the conveyor power source
- Disengage any takeups
- Clear the conveyor belt or clamp securely in place

⚠ WARNING

Use Personal Protective Equipment (PPE):

- Safety eyewear
- Hardhats
- Safety footwear
- Gloves (especially when welding)

Close quarters, springs, and heavy components create a worksite that compromises a worker's eyes, feet, and skull. PPE must be worn to control the foreseeable hazards associated with the conveyor belt and Segmented Transfer Plates. Serious injuries can be avoided.

2.2 Operating Conveyors

There are two routine tasks that must be performed while the conveyor is running:

- Inspection of the Narrow Gap Segmented Transfer Plate performance
- Dynamic troubleshooting

⚠ DANGER

Every Baggage Handling Narrow Gap Segmented Transfer Plate is an in-running nip hazard. Never touch or prod an operating STP. Transfer plate hazards can cause instantaneous amputation and entrapment.

⚠ WARNING

Never adjust anything on an operating Baggage Handling Narrow Gap Segmented Transfer Plate. Unforeseeable belt projections and tears can catch on transfer plates and cause violent movements of the transfer plate segment or structure. Flailing hardware can cause serious injury or death.

⚠ WARNING

Baggage Handling Narrow Gap Transfer Plate segments can become projectile hazards. Stay as far from the transfer plate as practical and use safety eyewear and headgear. Projectiles can inflict serious injury.

⚠ DANGER

Every Baggage Handling Narrow Gap Segmented Transfer Plate is intended to operate as a belt conveyor protection device. The Baggage Handling Narrow Gap Segmented Transfer Plate is designed to prevent the ingestion of foreign material in to the conveyor system mechanism that could cause the conveyor to malfunction, and prevent damage to the belt. The Baggage Handling Narrow Gap Segmented Transfer Plate is not approved for any other use.

Section 3 – Pre-installation Checks and Options

This section will address the pre installation checks and options. This products is intended to be used in baggage handling coveyor belts of a specific kind. Not following this procedure will result in deficient product performance. It is extremely important that the transfer plate is installed in accordance to this installation manual in order to have a successful product installation. The Flexco Baggage Handling Narrow Gap Segmented Transfer Plate is designed to have full contact with the smooth face of the belt. The System design allows for some flexing. The segments can and will move as the segments contact the belt, allowing for variation on the belt profile.

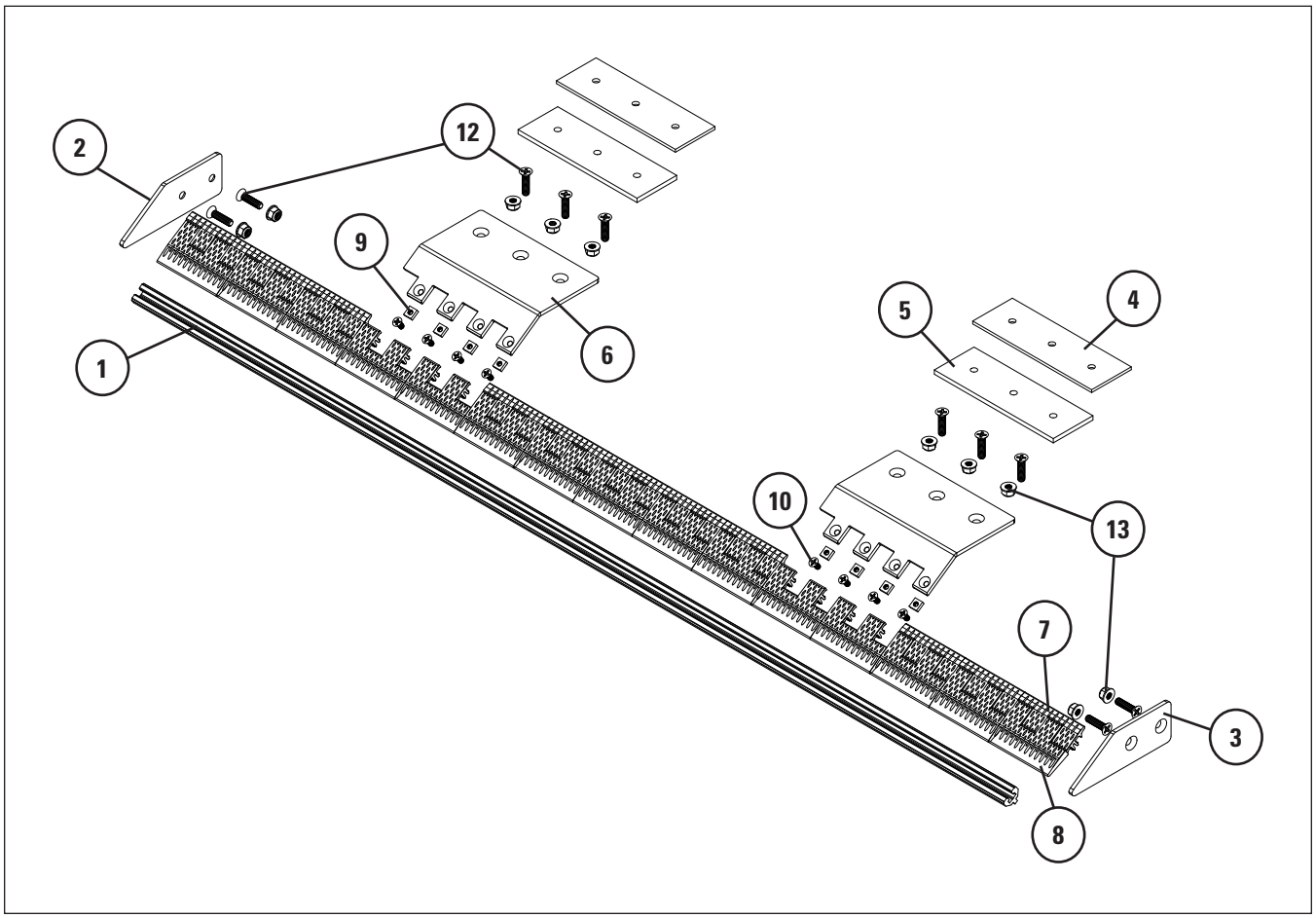
3.1 Checklist and Component Identification

- Check that the Baggage Handling Narrow Gap Segmented Transfer Plate size is correct for the beltline width.
- Check the Baggage Handling Narrow Gap Segmented Transfer Plate carton and make sure all the parts are included.
- Familiarize yourself with the components.
- Review the "Tools Needed" list on the top of the installation instructions.
- Inspect the belt and splice(s) for damage (tears, gouges, raised splices, etc.) that may interfere with the Baggage Handling Narrow Gap Segmented Transfer Plate.
- Baggage Handling Narrow Gap Segmented Transfer Plates are not generally recommended for use on impression cover, textured, or cleated belts.
- Determine the material flow or direction of the movement of the belt.
- Check the conveyor site:
  - Are there obstructions that may require Baggage Handling Narrow Gap Segmented Transfer Plate location adjustments?

CAUTION: All parts of the Baggage Handling Narrow Gap Segmented Transfer Plate must be firmly attached to the belt conveyor structure and be properly welded, bolted, or anchored in compliance with your company's policies, specifications, and any applicable legal or regulatory requirements prior to installation and use.

Flexco Baggage Handling Narrow Gap Segment Transfer Plates are designed to absorb the damage of a foreign object and protect the belt from any injury while maintaining product flow. The transfer plate was designed to be compatible with check-in baggage (non containerized), polybags, nylon bags, small packages and general parcel and material.

A Baggage Handling Narrow Gap Segmented Transfer Plate has four (4) main components and one (1) set of fasteners.



Item	Item Code	Ordering Number	Quanity
1	GT131	MOUNTING BAR UNITED STP 42IN	1
2	GT130	SIDE GUARD LEFT UNITED STP	1
3	GT129	SIDE GUARD RIGHT UNITED STP	1
4	GT132	SHIM UHMW WHITE 2X6X.125	2
5	GT133	SHIM UHMW WHITE 2X6X.188	2
6	GT134	MOUNTING BRACKET UNITED STP	2
7	56636	TGB-SEG-CENTER-.75/19MM	11
8	56638	TGB-SEG-CENTER-1.5/38MM	15
9	GR183	SEGMENT FIXING NUT 10-24 ZN	8
10	GT160	SCREW CNTRSUNK 10-24 x 7/16 SS	8
11	GR272	SHIM 2X4 .030THK	4
12	G2266	NUT HEX NYLOCK FLNG 1/4-20 ZP	10
13	GT161	SCREW CNTRSUNK 1/4-20 x 1 ZN	10

3.2 Tools Required for Installation

The following tools are required for the installation. Please note that some tools are optional, based on the preferred installation method. In this installation manual, we will describe both methods.

Tools required for installation:

- Straight edge
- Screw drivers (Philips and flat head)
- Tape measure
- Hammer
- Hand held Band Saw or Hack Saw
- Saw or universal cutters
- Marker or grease pen
- Drill with drill bits
- Center Punch
- Flashlight
- Small crescent wrench
- Pliers

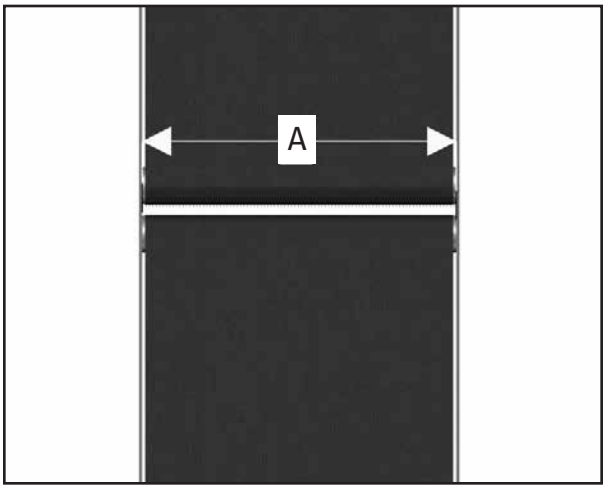
3.3 Conveyor Mounting Structure

The first step in installing your Baggage Handling Narrow Gap STP is to verify that there is adequate structure to install the STP. Please verify that the surfaces are firmly attached to the conveyor belt structure.

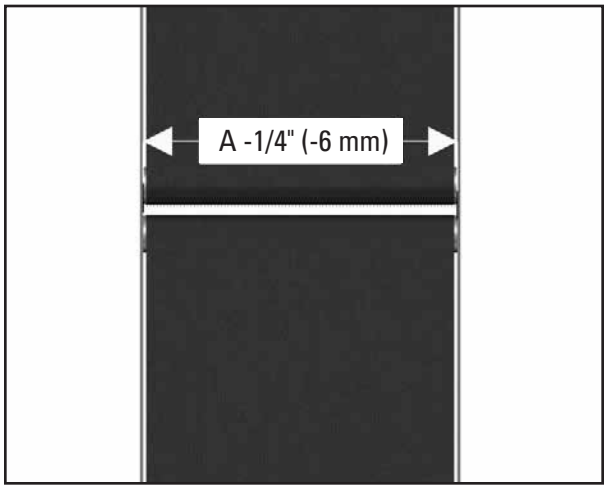
- If structure is not available to attach mounting brackets, please add the necessary structure to allow for proper installation.

3.4 Determine Belt Arrangement and Measure Internal Width of Structure

In order to properly fit the Baggage Handling Narrow Gap STP it is necessary to determine the conveyor configuration or arrangement. In this case, we will only fit the Baggage Handling Narrow Gap STP against a airport baggage conveyor. Once that the type of conveyor belt arrangement has been determined, measure the interior width of the structure. The measurement must be done at the widest point of the interior of the structure, where the transfer plate will be positioned.



1. Measure the inside of the structure in order to determine the length of the transfer plate (Dimension A) at the point of the desired installation. This measurement will be required to properly select the transfer plate and adequately install the plastic segments of the transfer plate.



2. After Dimension A is determined, subtract 1/4" (6 mm) from Dimension A. The resulting measurement will be the correct size of the mounting bar holding the plastic segments.

Section 4 - Installation Instructions

4.1 Baggage Handling Narrow Gap Segmented Transfer Plate Installation Instructions

CAUTION: Baggage Handling Narrow Gap Segmented Transfer Plate Installation Instructions – it is the user's responsibility to take the steps necessary to properly select and install the product. If you have questions or need assistance please contact Flexco using the information provided on page 4 of this manual.

Now that the Narrow Gap STP kit has been selected and the resting position of the transfer plate has been identified, we will proceed with the installation of the Baggage Handling Narrow Gap Segmented Transfer Plate.

Danger: physically lock out and tag out the conveyor at the power source before you begin the installation. Failure to follow proper Lock Out/Tag Out procedures could result in death or serious injury.

Pre-Installation

- Unpack the Baggage Handling Narrow Gap STP from the packaging
- Verify that the correct size Baggage Handling Narrow Gap STP has been ordered
- Verify that the correct components are included and in the right quantities
  - In most cases you will have to cut the aluminum support bar and add some extra center pieces that are necessary to guarantee correct fitment

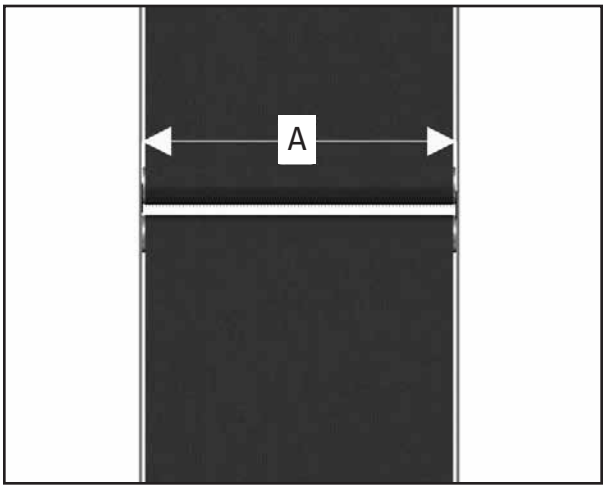
Installation Instructions

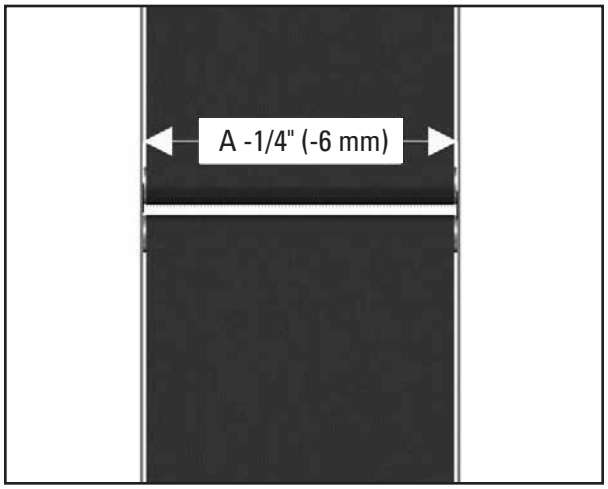
DANGER: It is imperative that OSHA Lockout/Tagout (LOTO) regulations, 29 CFR 1910.147, be followed before undertaking the preceding activities. Failure to use LOTO exposes workers to uncontrolled behavior of the belt. Severe injury or death can result. Do not attempt any of the preceding activities on a live conveyor belt.

DANGER: Every Baggage Handling Narrow Gap Segmented Transfer Plate is intended to operate as a belt conveyor protection device. The Baggage Handling Narrow Gap Segmented Transfer Plate is designed to prevent the ingestion of foreign material in to the conveyor system mechanism that could cause the conveyor to malfunction, and prevent damage to the belt.

1. Unbox all items from the carton and familiarize yourself with each component.

2. Measure the interior width of the structure. The measurement must be done at the widest point of the interior of the structure, where the transfer plate will be positioned.





3. Measure the inside of the structure in order to determine the length of the transfer plate (Dimension A) at the point of the desired installation. This measurement will be required to properly select the transfer plate length and adequately install the plastic segments of the transfer plate.
4 Cut the aluminum support bar to the proper length: structure internal width minus 1/4" (6 mm).
5. Assemble the STP system making sure you follow the diagram on page 7.
6. Place the STP system on top of the conveyor structure simulating the final resting position where the STP will operate.
7. Verify that the STP properly fits your conveyor structure. Make sure there is adequate installation structure and inspect for proper fitment.
8. With a marker, mark the holes that need to be drilled on the conveyor structure. Use the metal bracket holes as a template.
9. Remove the STP from the conveyor and use a transfer punch to mark the final location of the holes. This will indicate the place to drill the holes.
10. Start a pilot hole to locate the orifice that will serve as your guide. Progressively work up towards the diameter you want. It may take 3 or 4 different bits before you have the hole size you desire.
11. Once this is completed, clean any metal shavings from the hole that will be used to anchor the STP to the conveyor structure.
12. Firmly place the STP on top of the conveyor structure and align the installation holes with STP brackets (item #6). Place the plastic shims (items #4 and #5) between the conveyor structure and the STP support brackets (item #6). Loosely install the fasteners (item #12) as indicated on page 7.
13. Insert a cardboard shim (included in kit as item #11) between the belt and the plastic segments. This will dictate the correct gap between the belt surface and the STP plastic segment. It is important that the distance between the belt and the plastic segments should not exceed the thickness of a business card.
14. As appropriate, remove plastic shims (items #4 and #5) in order to achieve the desired STP height.
15. With the STP in place, proceed to tighten all fasteners and side metal plates (items #2 and #3) making sure that you install all nuts and bolts included on the kit.

Section 5 - Pre-Operation Checklist and Testing

5.1 Pre-Op Checklist

- Recheck that all fasteners are tightened properly.
- Check the Baggage Handling Narrow Gap STP location on the belt.
- Be sure that all installation materials and tools have been removed from the belt and the conveyor area.

5.2 Test Run the Conveyor

- Run the conveyor for at least 15 minutes and inspect the Baggage Handling Narrow Gap STP performance.
- If performance is inadequate, stop the belt and adjust the Baggage Handling Narrow Gap STP using steps 12-15 of installation instructions procedure.
- Return to step 5.1 if any adjustments have occurred.

NOTE: Observing the Baggage Handling Narrow Gap STP when the conveyor belt is running and performing properly will help detect problems in the future.

Section 6 – Maintenance

Flexco Baggage Handling Narrow Gap STPs are designed to operate with minimum maintenance. However, to maintain superior performance, some service is required. When the STP is installed, a regular maintenance program should be set up. This program will ensure that the STP operates at optimal efficiency and problems can be identified and fixed before the STP suffers any damage or stops working as expected.

All safety procedures for inspection of equipment (stationary or operating) must be observed. The Baggage Handling Narrow Gap STP operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and the correct lockout/tagout procedures observed.

6.1 New Installation Inspection

After the new Baggage Handling Narrow Gap STP has run for a few days, a visual inspection should be made to ensure the STP is performing properly. Make adjustments as needed.

To ensure optimal STP performance, keep segments free of product buildup (stickers, plastic bags, debris, etc).

6.2 Routine Visual Inspection (every 2-4 weeks)

A visual inspection of the STP and belt can determine:

- If the belt looks damaged or if there are areas that are eroding.
- If a plastic segment is worn out and needs to be replaced.
- If there is damage to the STP or other transfer plate components.
- If fugitive material is caught or built up on the STP segments.
- If there is cover damage to the belt.
- If there is vibration or bouncing of the STP on the belt.

If any of the above conditions exist, a determination should be made on when the conveyor can be stopped for STP maintenance.

6.3 Routine Physical Inspection (every 6-8 weeks)

When the conveyor is not in operation and is properly locked and tagged out, conduct a physical inspection of the STP to perform the following tasks:

- Clean material buildup off of the STP segments.
- Closely inspect the segments for wear and damage. Replace if needed.
- Ensure proper STP segment-to-belt contact.
- Inspect the STP rod and outer brackets for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- When maintenance tasks are completed, test run the conveyor to ensure the STP is performing properly.

6.4 Cleaning Instructions

Baggage Handling Narrow Gap STP plastic segments need to be cleaned of any material stuck to or adhered to the top surface of the segment. If the plastic shows sign of damage or severe erosion, replace the segment.

6.5 STP Wear Inspection

Note: Belt type, belt speed, material being conveyed, installation, and other application factors will affect STP wear. Visual inspection of missing segments or fasteners is necessary.

6.6 Baggage Handling Narrow Gap STP Maintenance Log

Conveyor Name/No. _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____–_____ Work done by: _____ Service Quote #: _____

Activity: _____

Date: _____–_____ Work done by: _____ Service Quote #: _____

Activity: _____

6.7 Baggage Handling Narrow Gap STP Maintenance Checklist

STP Transfer Plate: _____ **Ordering Number:** _____

Conveyor Information:

Conveyor Number:_____ Belt Condition: _____

Belt Width: ☐ 12" (300 mm) ☐ 18" (450 mm) ☐ 24" (600 mm) ☐ 30" (750 mm) ☐ 36" (900 mm) ☐ 42" (1050 mm) ☐ 48" (1200 mm) ☐ 54" (1350 mm) ☐ 60" (1500 mm)

Head Pulley Diameter (Belt & Lagging): _____

Belt Speed:_____fpm Belt Thickness: _____

Belt Splice:_____ Condition of Splice:_____ Number of splices:_____ ☐ Skived ☐ Unskived

Material conveyed: _____

Days per week run:_____ Hours per day run:_____

Segment Life:

Date plastic transfer segment installed:_____ Date plastic transfer segment inspected:_____

Estimated plastic transfer segment life:_____

Is STP segment making proper contact with belt? ☐ Yes ☐ No

Transfer plate condition: ☐ Good ☐ Grooved ☐ Smiled ☐ Not contacting belt ☐ Damaged

Was STP Adjusted: ☐ Yes ☐ No

Bar Condition: ☐ Good ☐ Bent ☐ Worn

STP Overall Performance: (Rate the following 1 - 5, 1 = very poor - 5 = very good)

Appearance: ☐ Comments: _____

Location: ☐ Comments: _____

Maintenance: ☐ Comments: _____

Performance: ☐ Comments: _____

Other Comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Problem	Possible Cause	Possible Solutions
Missing plastic segments on transfer plate	If a segment is missing, it may mean that foreign object debris got caught between the surface of the belt and the segment.	Replace with a new segment of same size and length
	Damage to belt	Repair the belt
	Improper installation	Transfer plates with a gap between segments and belt as opposed to light contact on both the leading and trailing tips which they are designed for.
	Repeated use of damaged or dislodged segments	Replace with new segments of same size and length
Transfer Plate assembly flexes with movement of belt	High points on belt	Transfer plate was designed to flex with the belt movement
	Roller has uneven wear	Transfer plate was designed to tolerate system wear
	Missing screws from mounting bracket assembly	Install missing fasteners and add removable thread locker
	Pulley out of round	Remove and replace out of round pulley
Mounting screws missing	Not enough removable thread locker added during installation	Replace fastener and add removable thread locker
Excessive Vibration or noise of the Segmented Transfer Plate	Installation is too tight to the belt	Add shims to mounting bracket to decrease tension between plastic segments and belt
	Installation of Segmented Transfer Plate was not done with cardboard shims	Add shims to mounting bracket to decrease tension between plastic segments and belt
	Belt fastener hitting transfer plate	High splice profile – does not damage belt or STP. A bias splice will minimize this effect
Uneven transfer plate segment position	Mismatch component selection	The transfer plate support bar must be replaced with a correct 1.25" (32 mm) bar
Segments migrate outside of the bar	Side guards are not properly mounted on STP system	Inspect side guard fasteners and make sure they are properly set and completely seated on the assembly

Section 8 – Baggage Handling Narrow Gap STP Measurement Form

8.1 Baggage Handling Narrow Gap Segmented Transfer Plate Conveyor Information

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

Conveyor Name/No. ________________________

Date: ________________ Work done by: ____________ Service Quote #: ____________

Dimension A: ____________ Item Code: ______________

If you have any questions or problems reading measurement and selection of your Baggage Handling Narrow Gap Segmented Transfer Plate please contact Customer Service in the United States and Canada: 1-800-541-8028 or visit Flexco.com for more information.

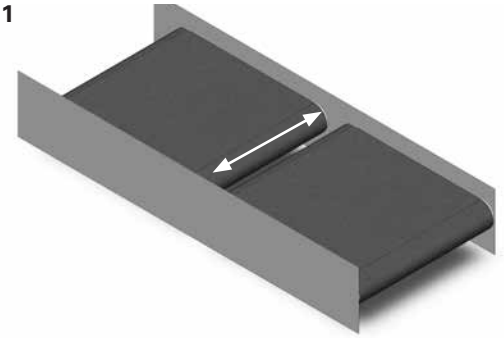
Section 9 – Baggage Handling Narrow Gap STP Ordering Form

Structure Width
Dimension A: _____

Head Pulley Diameter (Belt): _____

Order Item Code 56270

Fig. 1



Section 10 – Replacement Parts

SEGMENTED TRANSFER PLATES REPLACEMENT PARTS

DESCRIPTION	ORDERING NUMBER	ITEM CODE
CENTER SEGMENT UPPER-.75/19MM	TGB-SEG-CENTER-.75/19MM	56636
CENTER SEGMENT BOTTOM -1.5/38MM	TGB-SEG-CENTER-1.5/38MM	56638

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