

Manual of Installation and Use

SafeTSlope Edge Smoother



 **TROXLER**[®]
The Leader in Construction Testing Equipment

TROXLER SERVICE CENTERS

Troxler Corporate Headquarters

3008 Cornwallis Road
P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (919) 549-8661
Fax: (919) 549-0761
E-mail: troxserv@troxlerlabs.com
Web: www.troxlerlabs.com

Maryland Service Center

9574 Deereco Road
Timonium, MD 21093
Tel: (410) 561-5850
Fax: (410) 561-5852
E-mail: troxlermd@troxlerlabs.com

Midwestern Branch Office

1430 Brook Drive
Downers Grove, IL 60515
Tel: (630) 261-9304
Fax: (630) 261-9341
E-mail: troxmidw@troxlerlabs.com

Western Regional Branch Office

11300 Sanders Drive, Suite 7
Rancho Cordova, CA 95742
Tel: (916) 631-0234
Fax: (916) 631-0541
E-mail: troxca@troxlerlabs.com

Southwestern Branch Office

2000 East Randol Mill Road
Suite 611
Arlington, TX 76011
Tel: (817) 275-0571
Fax: (817) 275-8562
E-mail: troxsw@troxlerlabs.com

Florida Service Center

2376 Forsyth Road
Orlando, FL 32807
Tel: (407) 681-4221
Fax: (407) 681-3188
E-mail: troxlerfl@troxlerlabs.com

Colorado Service Center

702 West 48th Avenue, Unit G
Denver, CO 80216
Tel: (303) 298-0751
Fax: (303) 298-0778
E-mail: troxlerco@troxlerlabs.com

Canadian Branch Office

7125 Pacific Circle, Unit 13
Mississauga, Ontario L5T-2A5
Canada
Tel: (905) 565-0633
Fax: (905) 564-7092
E-mail: troxler@istar.ca

Troxler European Subsidiary

Troxler Electronics GmbH
Gilchinger Strasse 33
D-82239 Alling nr. Munich, Germany
Tel: ++49-8141-71063
Fax: ++49-8141-80731
E-mail: troxler@t-online.de

CONVENTIONS USED IN THIS MANUAL

Throughout this manual, symbols and special formatting are used to reveal the purpose of the text as follows:

WARNING

Indicates conditions or procedures that, if not followed correctly, may cause personal injury.

CAUTION

Indicates conditions or procedures that, if not followed correctly, may cause equipment damage.

NOTE

Indicates important information that must be read to ensure proper operation.

- ◆ Diamonds indicate a list of things needed (such as equipment) or things to know.
- ▶ Triangles indicate that more than one option is available. Carefully select the option that applies.

TABLE OF CONTENTS

INTRODUCTION TO THE SAFETSLOPE EDGE SMOOTHER.....	5
EXPLANATION OF KEY PARTS.....	6
INSTALLING THE SAFETSLOPE EDGE SMOOTHER	8
Tools Required.....	8
Preparing the Mounting Holes	8
Installing the SafeTSlope Edge Smoother	10
USING THE SAFETSLOPE EDGE SMOOTHER DURING PAVING.....	11
Positioning the SafeTSlope Edge Smoother	11
Adjusting the Depth	11
Adjusting the Downward Pressure.....	11
Mat or Lane Width.....	11
Rolling Patterns.....	11
Keeping the End Gate in Proper Position	12

TABLE OF FIGURES

Figure 1: Major Parts of the SafeTSlope Edge Smoother.....	6
Figure 2: Mounting Parts of the SafeTSlope Edge Smoother.....	7
Figure 3: SafeTSlope Mounting Slots.....	9

INTRODUCTION TO THE SAFETSLOPE EDGE SMOOTHER

SafeTSlope is used as a paver attachment tool to help construct a higher density, longer-lasting, low angle wedge fillet on the outside edge of the paved mat. Using a single, simple adjustment, the SafeTSlope Edge Smoother can help a paving crew construct a tapered shoulder edge fillet.

SafeTSlope is designed primarily to construct a pre-compacted, tapered mat edge with a final angle after rolling of the lane mat of less than 45° to the horizontal. The SafeTSlope Edge Smoother is typically used in a matched pair, one for the right side of the paver and one for the left side of the paver. The purpose of providing both left and right versions is to facilitate creating the shoulder wedge fillet whether paving in the direction of traffic or against the traffic pattern.

While paving, the SafeTSlope Edge Smoother is adjusted to keep the bottom edge of the device in contact with the road shoulder surface in order to prevent asphalt leakage under the wedge, thus producing a well-defined wedge fillet.

The following instructions explain the basic installation and adjustments needed to use the SafeTSlope Edge Smoother to construct a pre-compacted angled shoulder wedge fillet.

CAUTION

HEAVY! To avoid injury, use care when lifting and installing.

EXPLANATION OF KEY PARTS

The **Guide Rail** allows the SafeTSlope Edge Smoother to ride along the surface of the road shoulder following its topography. The two-inch radius helps the transition when the device encounters an obstacle such as a driveway cut or road intersection.

The **Self Adjusting Internal Spring** provides a downward force to keep the Guide Rail in contact with the shoulder surface.

The **30° Forming Edge** is the feature that actually produces the wedge fillet. When adjusted properly, the SafeTSlope Edge Smoother extends below the screed strike-off plate and extrudes the fillet at the specified angle.

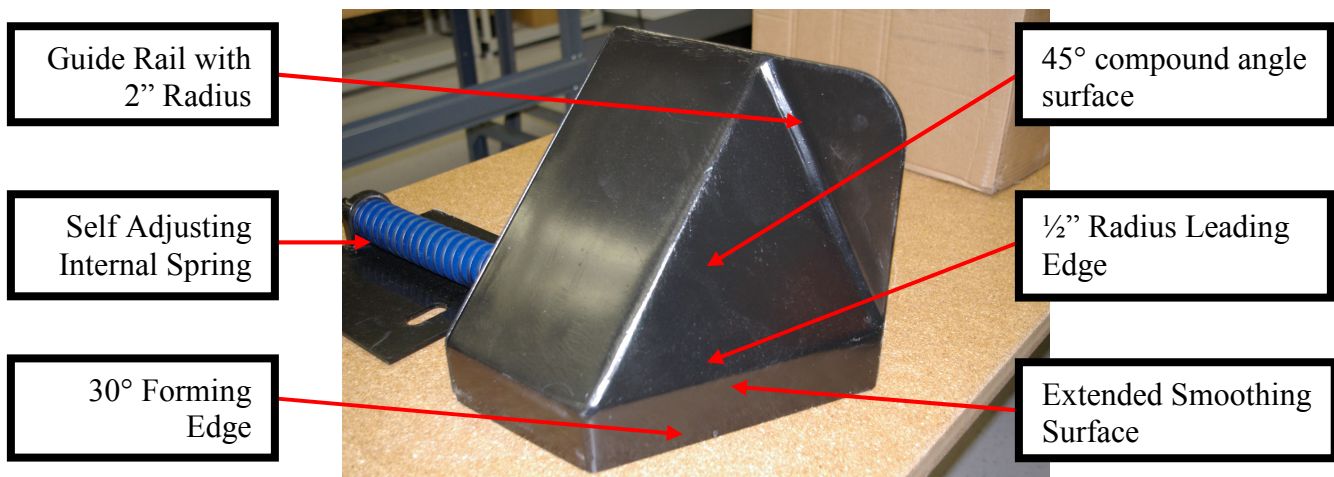


Figure 1: Major Parts of the SafeTSlope Edge Smoother

The **45° Compound Angle Surface** is the patented feature which makes it possible for the SafeTSlope Edge Smoother to increase compaction on the wedge fillet. This feature forces more asphalt mix under the device than would ordinarily occur with a simple strike off.

The **½" Radius Leading Edge** provides a smooth transition for the asphalt being extruded under the SafeTSlope Edge Smoother.

The **Extended Smoothing Surface** acts as a trowel to smooth the surface of the wedge fillet to give it a better finish.

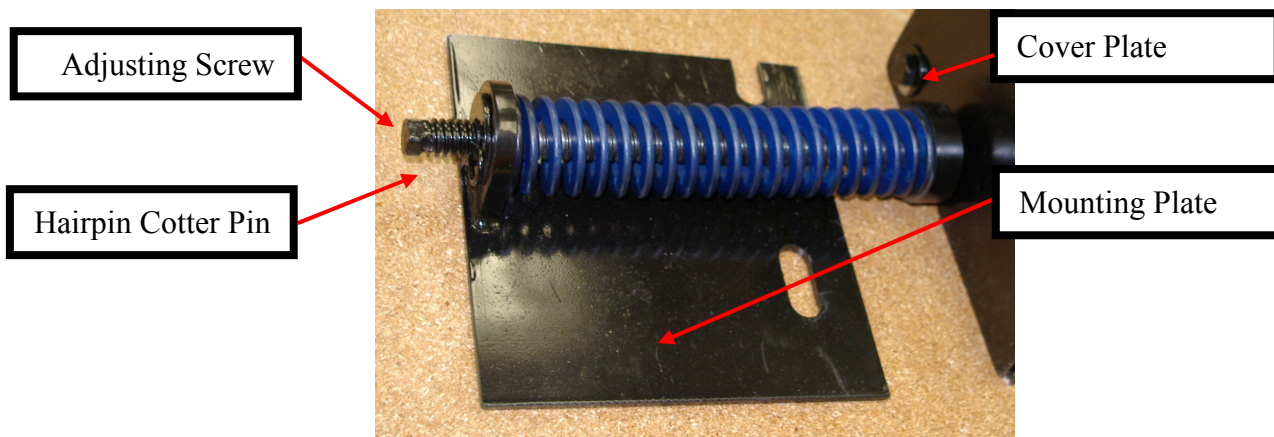


Figure 2: Mounting Parts of the SafeTSlope Edge Smoother

The **Adjusting Screw** sets the height of the SafeTSlope Edge Smoother and when properly adjusted compresses the internal spring to supply a downward force keeping the device in contact with the shoulder surface.

The **Cover Plate** protects the inner adjustment elements from dirt and asphalt.

When the SafeTSlope Edge Smoother is not needed during paving or for cleaning, it can be easily detached from the **Mounting Plate** by removing the **Hairpin Cotter Pin**.

INSTALLING THE SAFET*SLOPE* EDGE SMOOTHER

NOTES

Installation requires mounting holes on the screed extensions. Mounting hardware has been included.



TOOLS REQUIRED

- Drill
- Drill Bits
- Tap
- Socket Set
- For some installations, cutting torch and welding capability

PREPARING THE MOUNTING HOLES

The SafeTSlope Edge Smoother can be installed on the hydraulic screed extension and/or on one foot and two foot wide bolt-on screed extensions.

NOTE

Two holes are needed for mounting the SafeTSlope Edge Smoother. There are two mounting slots on the SafeTSlope Edge Smoother: the “Inboard Mounting Slot” and the “Outboard Mounting Slot.”

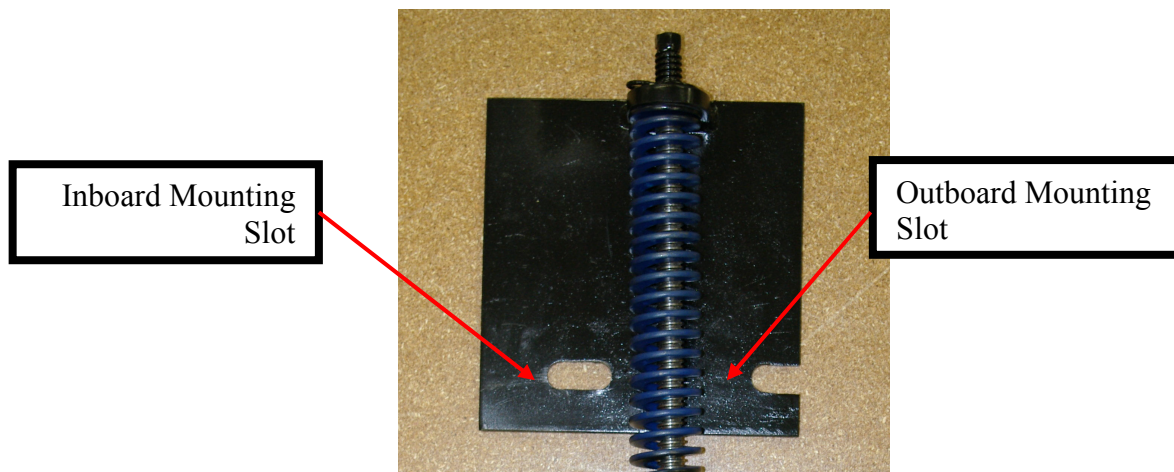


Figure 3: SafeTSlope Mounting Slots

The **Inboard Mounting Slot** is located approximately 6” in from the outboard edge of the SafeTSlope Edge Smoother (This is the edge of the device closest to the “End Gate”) and is shown on the photo above.

The **Outboard Mounting Slot** is located along the outboard edge of the SafeTSlope Edge Smoother again closest to the “End Gate” and also shown in the photo above.

Approximate Mounting Hole Locations:

The location for the Inboard Mounting Hole is approximately 16 inches above the bottom of the screed plate and approximately 6 inches in from the end gate side of the screed extension.

The location for the Outboard Mounting Hole is approximately 16 inches above the bottom of the screed plate and approximately 1 inch in from the end gate side of the screed extension.

Preparing the Mounting Holes

1. Measure and mark the locations for the two mounting holes.
2. Before drilling the locations, check the alignment of the marked holes by placing the SafeTSlope Edge Smoother mounting plate up against the screed extension and verify that the marked holes line up with the pre-drilled slots on the Mounting Plate.
3. Drill and tap each hole for a ½-inch bolt. If the metal in the mounting areas is too thin to tap satisfactorily, weld a nut on the back of the hole.

INSTALLING THE SAFETSLOPE EDGE SMOOTHER

1. Complete steps 1-3 above to prepare the mounting holes.
2. Remove the mounting plate from the SafeTSlope Edge Smoother assembly by removing the Hairpin Cotter Pin and sliding the plate over the Adjusting Screw.
3. Position the Mounting Plate over the mounting holes and against the end gate.
4. Insert a bolt and washer into each of the mounting slots and tighten.
5. Position the SafeTSlope Edge Smoother assembly under the mounting plate support bracket.
6. Lift the assembly while inserting the Adjusting Screw through the hole in the support bracket.
7. Insert the Hairpin Cotter Pin into the hole in the Adjusting Screw.
8. Turn the Adjusting Screw *clockwise* until the lower section of the SafeTSlope Edge Smoother is even with the bottom of the screed strike off.

The SafeTSlope Edge Smoother is now mounted.

NOTE

Prior to setting the position of the paving screed and lowering for paving, the SafeTSlope Edge Smoother should be left in its uppermost position to ensure that the device does not get damaged while adjustments to the paver are completed.

End of Installation Section of Manual

USING THE SAFETSLOPE EDGE SMOOTHER DURING PAVING

POSITIONING THE SAFETSLOPE EDGE SMOOTHER

Once the paving operation begins, and full mat depth has been reached, the SafeTSlope Edge Smoother should be adjusted to create the wedge fillet to the full depth of the mat. This is accomplished by lowering the device to the full mat depth below the screed.

ADJUSTING THE DEPTH

Rotate the SafeTSlope Edge Smoother Adjusting Screw counterclockwise. This will extend the wedge assembly downward below the screed strike off plate. Continue extending until the guide rail reaches the roadbed surface. Two ways of recognizing when this is accomplished are as follows.

Looking behind the paver one should see the road edge at a 30° angle to the horizontal with a clean edge at the shoulder surface.

As the adjusting screw is rotated note that the hairpin cotter pin will rise above the surface of the mounting bracket.

ADJUSTING THE DOWNWARD PRESSURE

Once contact is made with the shoulder roadbed, continue to extend the wedge assembly until the cotter pin is “floating” approximately ½ to 1 inch above the surface of the mounting bracket. This will insure a downward pressure exerted by the internal spring to keep the device in contact with the shoulder surface.

MAT OR LANE WIDTH

It is important to know that the SafeTSlope Edge Smoother decreases the width of the lane being laid by approximately 6 inches, depending on the thickness of mat being laid. This decreased width needs to be added back in by extending the end gate the appropriate amount.

ROLLING PATTERNS

It is recommended that the first rolling pass on the freshly laid mat be made with the roller drum away from the outside edge of the lane by approximately 8 – 12 inches. This will insure that the shoulder wedge fillet will not “roll up” due to outward pressure from the first pass. The roller should be driven straight up to the back of the paver and back without turning the roller. If possible, this should be done in vibratory mode.

CAUTION

DO NOT ROLL THE TAPER. Attempting to roll the taper can result in damaging or destroying the area. It is not necessary to roll the fillet as the SafeTSlope Edge Smoother increases the density during extrusion from the paver.

WARNING!

During paving, the SafeTSlope Edge Smoother could be exposed to contact with the crossfeed auger and auger shaft if the hydraulic screed extension is drawn in too close to the main screed. Severe damage could occur to both the crossfeed auger and the SafeTSlope Edge Smoother if they come in contact.

WARNING!

When paving is completed in a given direction and the paver is to be moved to a new position, the SafeTSlope Edge Smoother should be raised to its mounting height or uppermost position. This will insure that the device does not hang below the screed and come in contact with road features that may damage the device.

KEEPING THE END GATE IN PROPER POSITION

In order for the SafeTSlope Edge Smoother to work properly, the paver end gate ski must be kept riding directly on the surface being paved. Most end gates have a tension rod, or compression spring, mechanism which can be adjusted to keep enough downward pressure on the ski so that it does not lift up during paving. If the end gate lifts off the pavement for any reason, asphalt may flow out the side of the paver and not provide enough asphalt to the SafeTSlope Edge Smoother to achieve proper pre-compaction in order to construct a high quality tapered edge.

For assistance during installation and usage of the SafeTSlope Edge Smoother, call Troxler Customer Support at **1-877-TROXLER**.



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