



AdvantEDGE™

Owner's Manual

REV: 2024.6.14



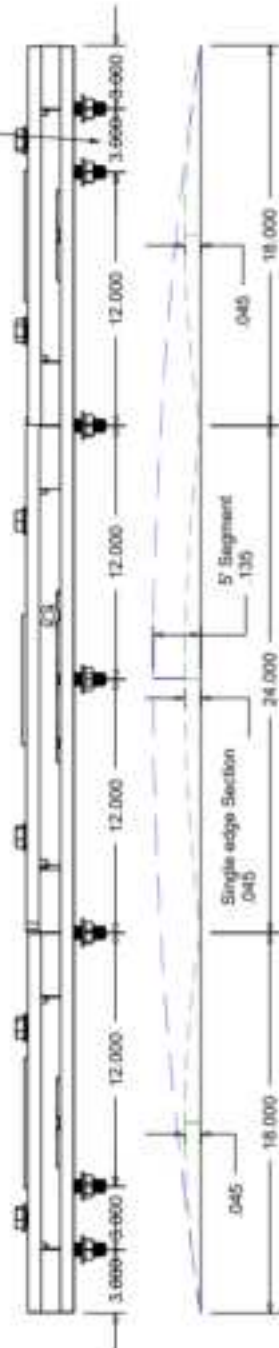
Kage AdvantEdge Installation

Acceptable Warpage

Maximum acceptable warpage on product attachment point is .045" (3/64") arc radius using a straight edge as the chord per cutting edge section.

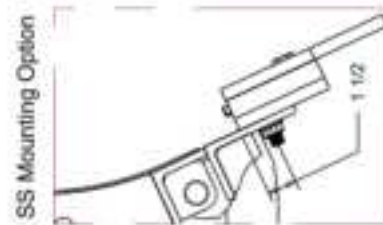
Installing the KAGE AdvantEdge on products warped beyond this point will cause cutting edges to bind, restricting vertical motion.

Example of standard highway punch bolt pattern. Number of 12" spaces will vary depending on the plow size. Holes are 5/8" round.

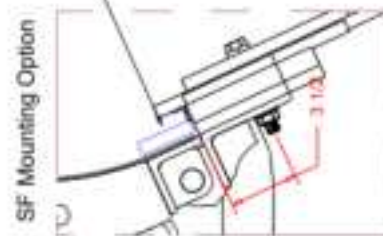


Chord representation not shown to scale.

Installation height

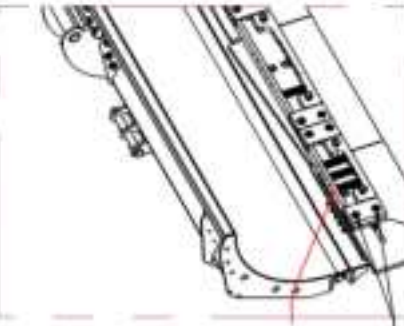


SS Mounting Option



SF Mounting Option

Spring count by plow weight



Use locklight on Turret bolts

AdvantEdge comes assembled and bolts directly to virtually any standard highway punch bowl or pusher. (See above)

Do not bolt over moldboard (blue dashes).
Two mounting heights are available.

To calculate the total number of springs, divide the weight of your plow by 128.7. Then divide that number by the number of cutting edges. Numbers that do not divide by the number of cutting edges may be rounded up or down depending on your requirements.

Example: 14" Kage plow without box

14' Flow weight 3089 lbs / $\pm 28.7 = 24$ Springs
24 total springs / 8 cutting edges = 3 springs per cutting edge

Copyright © 2003 Kappa Kappa Gamma. All Rights Reserved.

www.hugoboss.com

(0444) 314-8662

Page 4

Kage AdvantEdge Weight and Dimensions

Cutting Edge bolt patterns are NOT standard highway punch bolt spacing

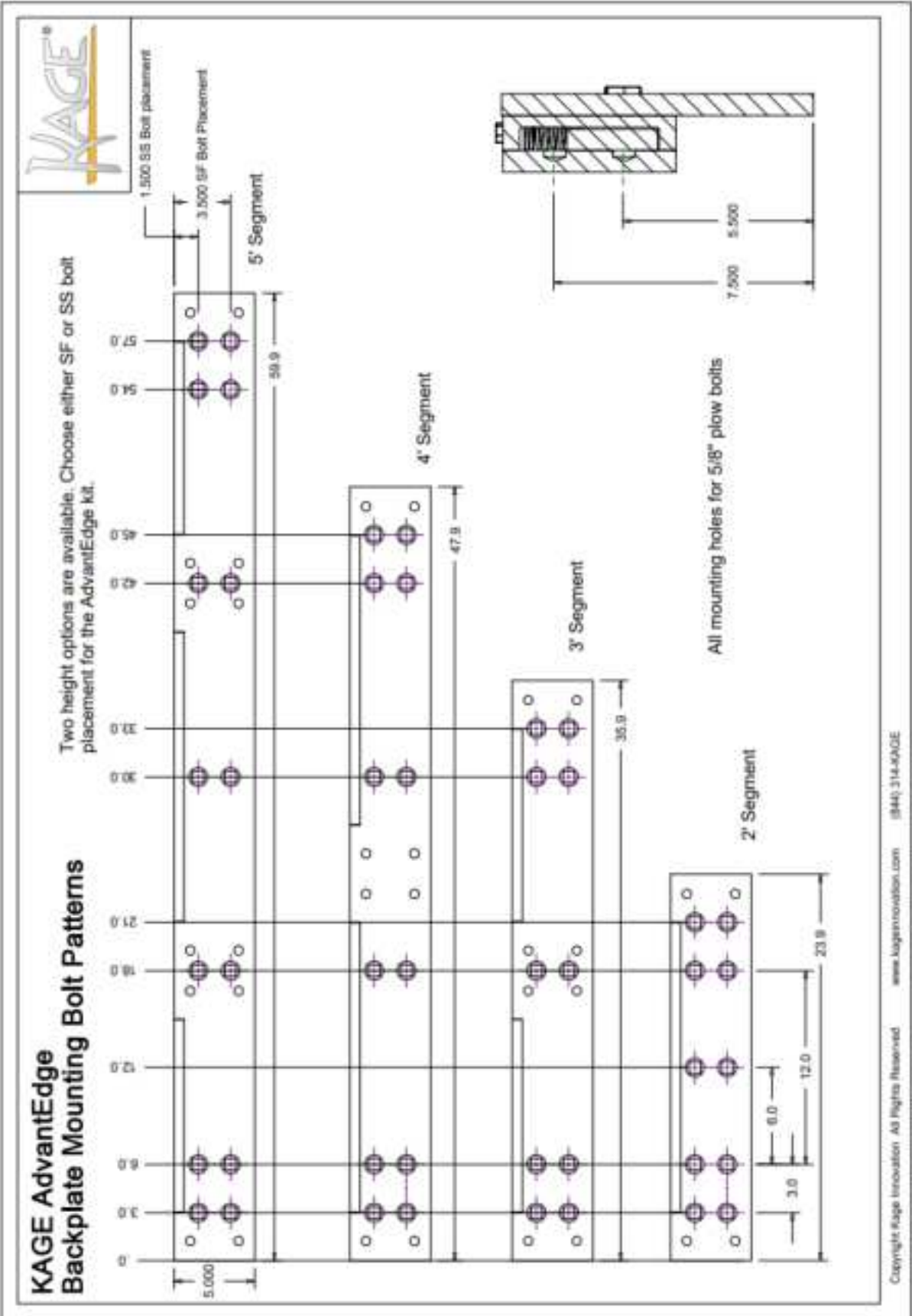
The diagram includes three main views:

- Top View:** Shows a rectangular plate with dimensions 15 (width) and 9 (length). It features a series of holes along one edge.
- Side View (Left):** Labeled "SF bolt placement". It shows a cross-section of the plate with dimensions: 3 1/2 (total height), 1 1/2 (height from base to first hole), 5 (distance between holes), 2 1/4 (height of top flange), 9 (total length), 5 1/2 (distance from end to last hole), and 5/8 (thickness).
- Side View (Right):** Labeled "SE bolt placement". It shows a similar cross-section with dimensions: 7 1/2 (total height), 3 1/2 (height from base to first hole), 1 1/2 (height of top flange), and 5/8 (thickness).
- Bottom View:** Shows two side profiles of the plate. The left profile indicates "3/4 Max Oscillation" and "2.91°" angle. The right profile indicates "1 3/8 Max Vertical Travel".

Other bolt patterns may be available, call Kage for assistance

Part Name	Part Number	Segment Qty	Cutting Edge Steel	Usable Cutting Edge	Vertical Travel	Max Peaking Angle of Sections	Weight in lbs	Attachment Bolt Pattern
SF AdvantEdge 8'	SFAE8	2 x 4'	Hardox® 500	3"	1.375"	2°	311	Highway Punch
SF AdvantEdge 9'	SFAE9	3 x 3'	Hardox® 500	3"	1.375"	2°	363	Highway Punch
SF AdvantEdge 10'	SFAE10	2 x 5'	Hardox® 500	3"	1.375"	2°	397	Highway Punch
SF AdvantEdge 12'	SFAE12	4 x 3'	Hardox® 500	3"	1.375"	2°	484	Highway Punch
SF AdvantEdge 14'	SFAE14	2 x 3' + 2 x 4'	Hardox® 500	3"	1.375"	2°	654	Highway Punch

Copyright Kage Innovation All Rights Reserved www.kagennovation.com (844) 314-KAGE



KAGE®

The technical drawing consists of two views of a door handle assembly. The top view is a perspective drawing showing the handle's profile, which includes a curved grip and a rectangular base plate. The base plate has three screws along its top edge and two screws on its side. The bottom view is a top-down plan view of the same assembly. It shows the rectangular base plate with a central vertical slot. There are three screws along the top edge and two screws along the bottom edge. A dimension line on the left side of the base plate indicates a width of 100 mm.

Item Number	Part Name	Part Number	Revision	Quantity
1	Edge Extension 18	590EE18	1	2
2	Edge Extension 24	590EE24	1	2
3	Flat Washer 5/8 x 1.25 x .25 Thick	91201A035		4
4	Hex Bolt GR5 5/8-11 x 2.25	91257A003		4

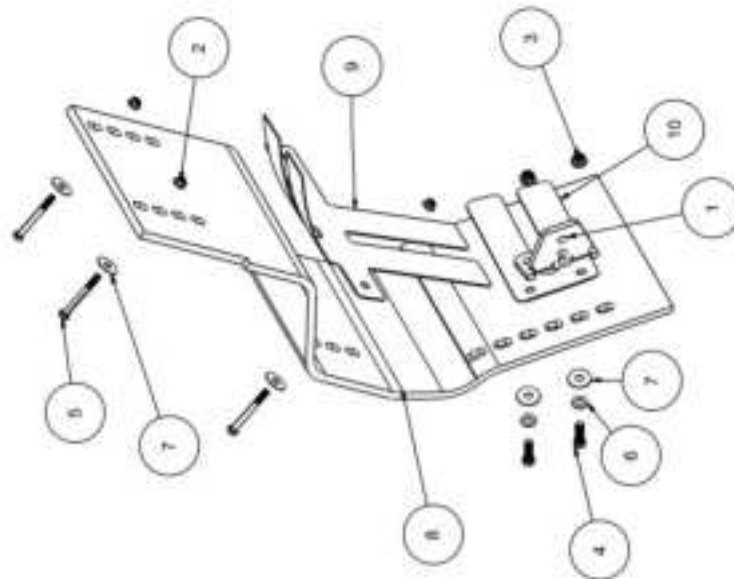
AdvantEdge Snow Catch Kit
SCAE-K

Version# 1

Version Starting Serial #

Kage Snowfire plow systems being fitted with an AdvanEdge are recommended to be upgraded to the Snow Catch Kit shown below. This kit prevents snow from leaking around the AdvantEdge.

Kage pusher boxes with serial numbers lower than 124-14730 will need a new Side Panel Driver (363-2-D) and a new Side Panel Passenger (363-2-P) in addition to this kit.



Item Number	Part Name	Part Number	Quantity
1	Snow Catch Angle Advantage	223-3P4E	2
2	Flange Locknut 5/16-18	92019A320	8
3	Flange Locknut 3/8-16	93298A130	4
4	Hex Bolt GHS 3/8-16 x 1.5	92865A628	4
5	Hex Bolt, 5/16 - 18 x 3	91247A595	6
6	Flat Washer 3/8	ROC-807T-031	4
7	Fender Washer 3/8	91090A121	10
8	Snow Catch Advantage	N42-2AE	2
9	Snow Catch Spring SF	SC3125	2
10	Snow Catch Angle Spring SF	SCA3125	2

Copyright Kage Innovation All Rights Reserved
www.kageinnovation.com (844) 314-KAGE

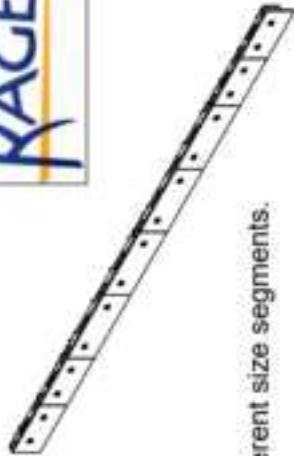
Page 7

AdvantEdge SS Kit 14

SSAE14

Version# 1

Version Starting Serial #



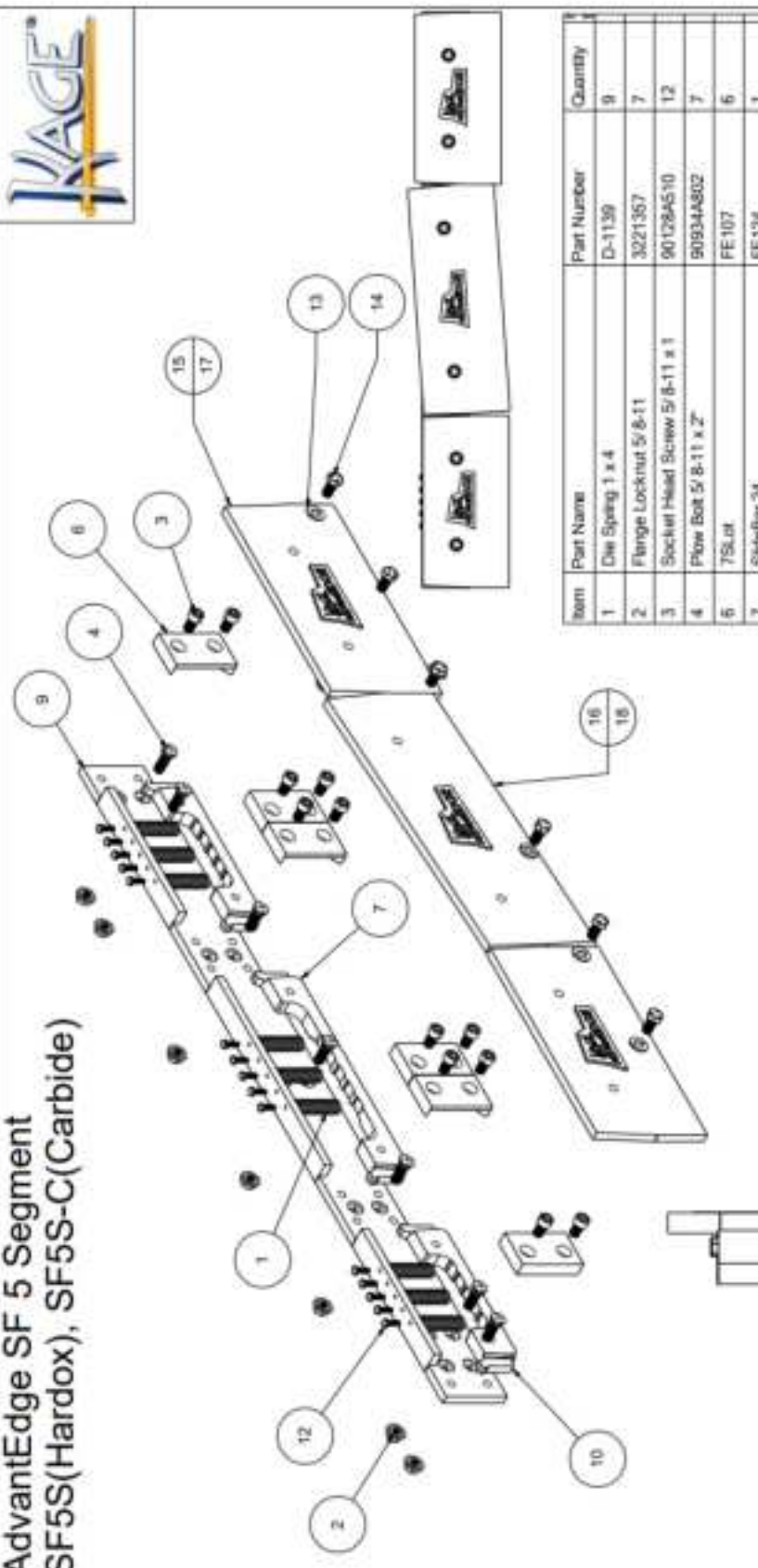
Nearly any size plow or pusher can be accommodated by selecting different size segments. Segments come in 2, 3, 4, and 5 foot lengths. Note if your attachment point is split in the center.

Below is an example of a 14' plow.



Copyright Kage Innovation All Rights Reserved. www.kageinnovation.com (844) 314-KAGE

Page 8



AdvantEdge SF 5 Segment
SF5S(Hardox), SF5S-C(Carbide)

Item	Part Name	Part Number	Quantity
1	Die Spring 1 x 4	D-1139	9
2	Flange Locknut 5/ 8-11	3221357	7
3	Socket Head Screw 5/ 8-11 x 1	90128AS10	12
4	Plow Bolt 5/ 8-11 x 2"	90934A802	7
5	7/32" x 1/2"	FE107	6
6	SlideBar 24"	FE124	1
7	BackPlate SFT Weldment	FE100	1
8	SlideBar 18"	FE118	2
9	Hex Bolt GRS 5/ 16-18 x 1	92865AS83	15
10	Ballnut Washer .556ID x 1.312OD x .098	K1312-G-088-2V	6
11	Hex Bolt GRS 5/ 8-11 x 1.5	92620A798	6
12	18 AdvantEdge Cutting Edge	SBC18FE	2
13	24 AdvantEdge Cutting Edge	SBC24FE	1
14	Carbide AdvantEdge blade 18"	SBC18FE-C	2
15	Carbide AdvantEdge blade 24"	SBC24FE-C	1

Copyright Kage Innovation. All Rights Reserved. www.kageinnovation.com (844) 314-KAGE

**AdvantEdge SF 4 Segment
SF4S(Hardox), SF4S-C(Carbide)**

Item	Part Name	Part Number	Quantity
1	Die Spring 1 x 4	D-1139	6
2	Flange Locknut 5/8-11	3221357	6
3	Socket Head Screw 5/8-11 x 1	90126A510	8
4	Flaw Bolt 5/8-11 x 2"	9090MA802	6
5	7/8" x 1"	FE107	4
6	SideBar 24	FE124	2
7	BackPlate 4FT Webment	FE90	1
10	Hex Bolt GR5 5/16-18 x 1	92865A683	10
11	Belleville Washer 656RD x 1.312OD x .098	K1312-G-098-2Y	4
12	Hex Bolt GR5 5/8-11 x 1.5	92620A798	4
13	24 AdvantEdge Cutting Edge	SBC24FE	2
14	Carbide Advantedge blade 24	SBC24FE-C	2

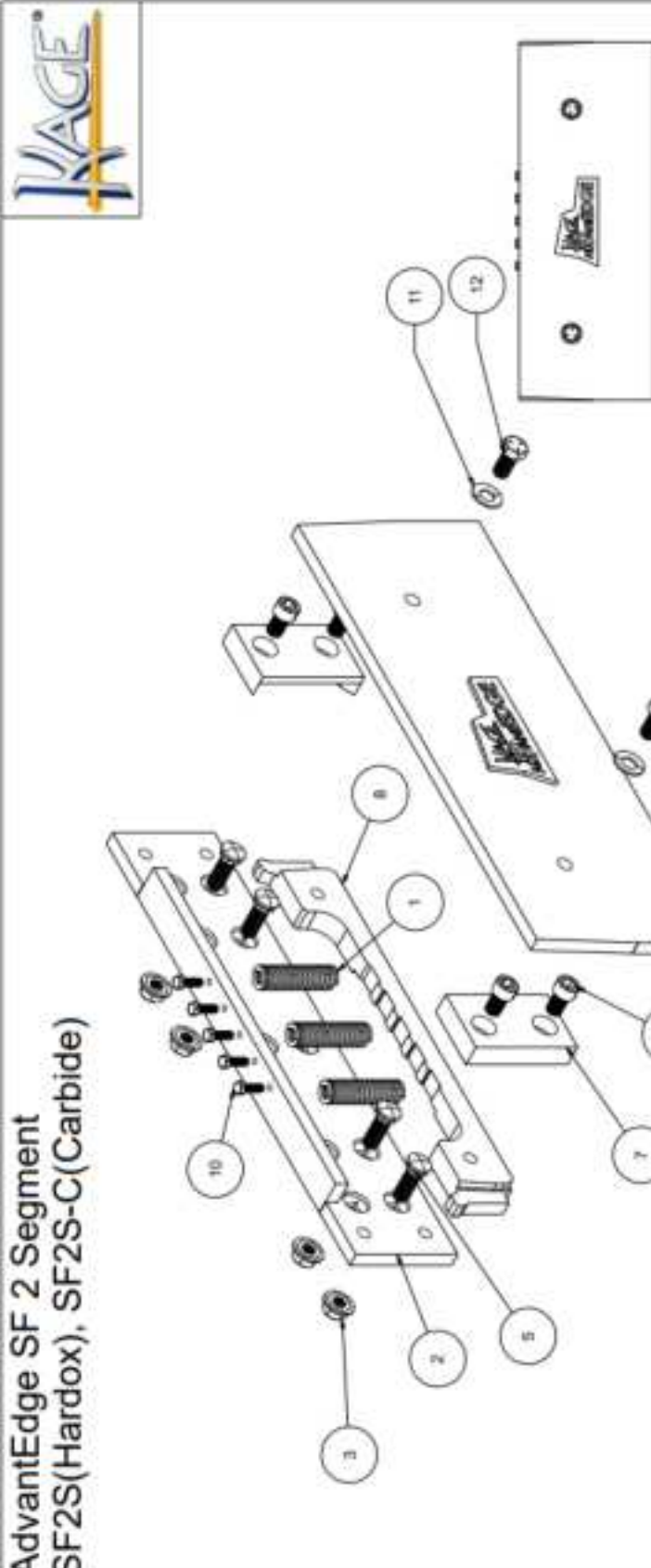
Copyright Kage Innovation All Rights Reserved www.kageinnovation.com (844) 314-KAGE

Page 11

**AdvantEdge SF 3 Segment
SF3S(Hardox), SF3S-C(Carbide)**

Item	Part Name	Part Number	Quantity
1	Die Spring 1 x 4	D-1139	6
2	Flange Locknut 5/8-11	3221357	5
3	Socket Head Screw 5/8-11 x 1	90128A510	8
4	Flange Ball 5/8-11 x 2"	90034A802	5
6	T-Slot	FE107	4
7	Slide Bar 18	FE118	2
8	Back Plate 3FT Wedgment	FE80	1
10	Hex Bolt GR5 5/16-18 x 1	92865A583	10
11	Bellevue Washer .656[D x	K1312-G-098-ZY	4
12	1.3120D x .098	92620A798	4
13	Hex Bolt GR5 5/8-11 x 1.5	92620A798	4
13	AdvantEdge Cutting Edge	SBC18FE	2
14	AdvantEdge blade 18	SBC18FE-C	2

Page 13



**AdvantEdge SF 2 Segment
SF2S(Hardox), SF2S-C(Carbide)**

Item	Part Name	Part Number	Quantity
1	Die Spring 1 x 4	D-1139	3
2	Back Plate 2" T Weldment	FE24	1
3	Range Lock Nut 5/8-11	3221357	4
4	Socket Head Screw 5/8-11 x 1	90128A510	4
5	Pin Bolt 5/8-11 x 2"	90934A802	4
7	7SLot	FE107	2
8	Slide Bar 24"	FE124	1
10	Hex Bolt GR5 5/16-18 x 1	92865A583	5
11	Belleville Washer .856ID x 1.31200 x .098	K1312-G-098-2Y	2
12	Hex Bolt GR5 5/8-11 x 1.5	92520A758	2
13	24 AdvantEdge Cutting Edge	SBC24FE	1
14	Carbide AdvantEdge Blade 24"	SBC24FE-C	1

Copyright Kage Innovation All Rights Reserved www.kageinnovation.com (844) 314-KAGE

Page 15

Kage Limited Warranty

Kage Innovation will repair or, at the option of Kage Innovation, replace those parts which prove defective due to material or workmanship under normal use for a period of two (2) years from the date of retail sale or date of invoice from Kage Innovation, whichever is later. Expendable items, such as rubber, or polyurethane are excluded from this warranty.

Kage Innovation warrants that the products manufactured by us to be in accordance with our published specifications or those specifications agreed to by us in writing at the time of sale. The obligation of Kage Innovation is expressly limited to repairing or replacing, at its option, any product not meeting such specifications within the warranty period.

LIMITATIONS OF WARRANTY AND DAMAGES

KAGE INNOVATION MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF.

IN NO EVENT SHALL KAGE INNOVATION, BE HELD LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR DAMAGES RESULTING FROM MISAPPLICATION, ABUSE, MISUSE, ACTS OF GOD, UNAUTHORIZED ALTERATION OF THE KAGE INNOVATION PRODUCT, OR SUBSTITUTION OF PARTS NOT AUTHORIZED IN WRITING BY KAGE INNOVATION.

To obtain service under this warranty the consumer must return the defective Kage Innovation product to Kage Innovation directly, the dealer from which the product was purchased or to any authorized Kage Innovation dealer, transportation and freight charges prepaid. Only Kage Innovation dealers are authorized to perform the obligations under this warranty with pre-authorization from Kage Innovation.

No person is authorized to alter or amend this warranty or to create any warranty other than that set forth herein without the expressed written consent of Kage Innovation.

Kage Innovation reserves the right to make improvement changes on any of our products without prior notice.

Revision Comments

Date	Name	Description
6/14/2024	Josh	Brought into new format
8/2/2024	Mike	Added oscillation spec to spec sheet.
8/28/2024	Josh	Added belleville washers and longer bolts to breakdowns
12/26/2024	Josh	Added Carbide to breakdowns
2/24/2025	Josh	Updated installation instructions sheet