

Saab 4 Track Cutting On Laser Key Machines

By Jay Barker

The Saab 4 track key and lock system is a unique design unto itself and it can be confusing in determining how the key should be cut on 3D Pros.

Here is the Saab 4 track section in Greg Brandt's Sidewinder Key Specs reference, read this several times. Make sure you have a basic understanding of this system, tumbler positions, and how they relate to the key:

SAAB 4-Track '03+

STOP 112" 230 348 466 584 703 821 939

Uniform Width Groove .125"

★ Code Series:
DA 0001 - 2893 (7-cut)
DB 0001 - 4500 (8-cut)

DEPTHS
1 - .138" - (A)
2 - .116" - (B)
3 - .095" - (C)
4 - .073" - (D)
5 - .051" - (E)
Incr. - .0217
Web - .025
MACS - 3

Unlike other sidewinder keys with a uniform width center groove, the tumblers in these locks alternate contact of the left and right track as indicated by the pointers. Opposing cut depths have an inverse relationship which renders a uniform width groove. When coding original keys, care must be taken to use proper cut root width and bitting angles to allow the tumbler protrusion height of .118" (3mm) to pass freely through the groove. Cars which use this as the emergency key within a fob key (the 9-3) have only the tip seven cuts.

The published codes reflect the bitting for the left track. The opposing right track depth for each position will always be 6 minus the left track depth. Tumblers are stamped with letters A through E which correspond to the depth of cut and track (left/right) which the tumbler contacts. For instance, if the first two positions are cut 2 1 (left track), then the first two cuts of the right track would be 4 5. The first two tumblers in the lock would be B E since with the first position the tumbler contacts the left track, and with the second position the tumbler contacts the right track. It is vital to understand this relationship when decoding a lock. The key depicted would correspond to a code bitting 2 1 4 1 3 2 4 5. The right track would be cut 4 5 2 5 3 4 2 1 and the lock combined B E B A C D B E bow to tip.

It is critical to know the tumbler positions and which side of the key they contact. THOSE are the depth numbers that you will enter into the cut depth boxes of your LKP software.

Depending on the code program you use to look up these codes, the information will be displayed differently. For example, InstaCode displays only the left side cuts, while Genericode displays both left and right side cuts. This can be one source of confusion.

The other source of confusion can be due to how the boxes for the cut depths in your LKP software are laid out. They are in a straight line:

The screenshot shows the LKP software interface with three main sections:

- Step 1 : Select Correct Key Type**: Includes a search bar with "380" entered, a "Search" button, and a "Find" button. Below the search bar are lists for "Depths:", "Side A Spaces:", and "Side B Spaces:". A "Status" bar is at the bottom.
- Step 2 : Confirm Settings**: Displays key specifications: DSD: 380, Key Blank: SAAB 4-TRACK, Manufacturer: SAAB, Spaces: 8, Depths: 5, Track: Two (Left), Cut: Internal, Jaw: Jaw 1. It includes a diagram of a key blank with a red arrow pointing to the shoulder, labeled "SLIDE KEY UP TO SHOULDER". Below the diagram are settings for "Jaw Clamp: A", "Cutter: Cutter 1 TR2.5", and "Stop: Shoulder".
- Step 3 : Cut Your Key**: Features a vertical column of eight input boxes for cut depths, labeled 8 through 1 from top to bottom. The bottom box (1) is highlighted with a red box and contains the letter "A". There are "Trace" and "Start" buttons at the bottom, and a "Half Cut" button at the top right.

If you are using a code program that only displays the left side cuts, it would be natural to assume that you should enter the cuts as displayed, into the LKP cut depth boxes. That assumption is NOT correct.

In this example we will use the code DB1234. This is the 8 cut series:

In the Genericcode screenshot you see depths for both left and right tracks displayed. Using the Sidewinder Key Specs reference, identify the depths only in the positions and the track that have the arrows adjacent to them.

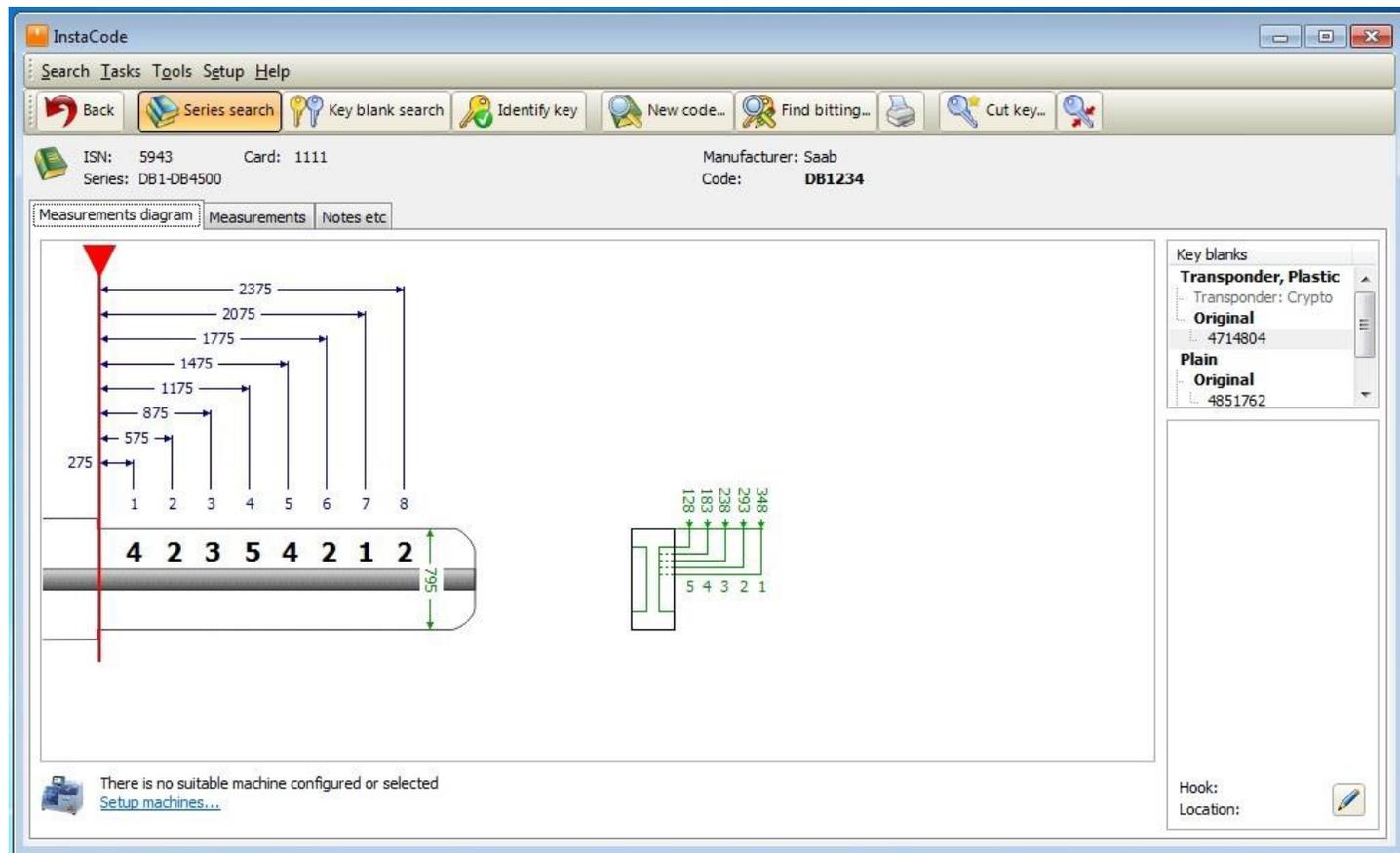
4 2 3 5 4 2 1 2

2 4 3 1 2 4 5 4

The depth values underlined are the ones you want to enter into the boxes in your LKP software.

4 4 3 5 4 4 5 2

If you are using a code program that only displays the left track cut depths, you must decipher the cut depths of the positions which have tumblers that contact the right track. Remember that the left and right track cut depths for any given position must add up to 6.



For the DB code series you must determine the right track cut depths in positions 2, 3, 6 & 7.

4 2 3 5 4 2 1 2
4 3 4 5

The depth values underlined are the ones you want to enter into the boxes in your LKP software.

4 4 3 5 4 4 5 2

The main difference between the DA and DB code series, from a cutting aspect, is that the DA series has 7 cuts and the DB series has 8 cuts. The DSD in the LKP software is the same for both series. There will always be 8 cut depth boxes that MUST be filled in. For the DA series (7 cut) you must fill the first box in with a random cut depth. I use a 3 regardless of what the next cut depth is.

In this example we will use the code DA1234. This is the 7 cut series:

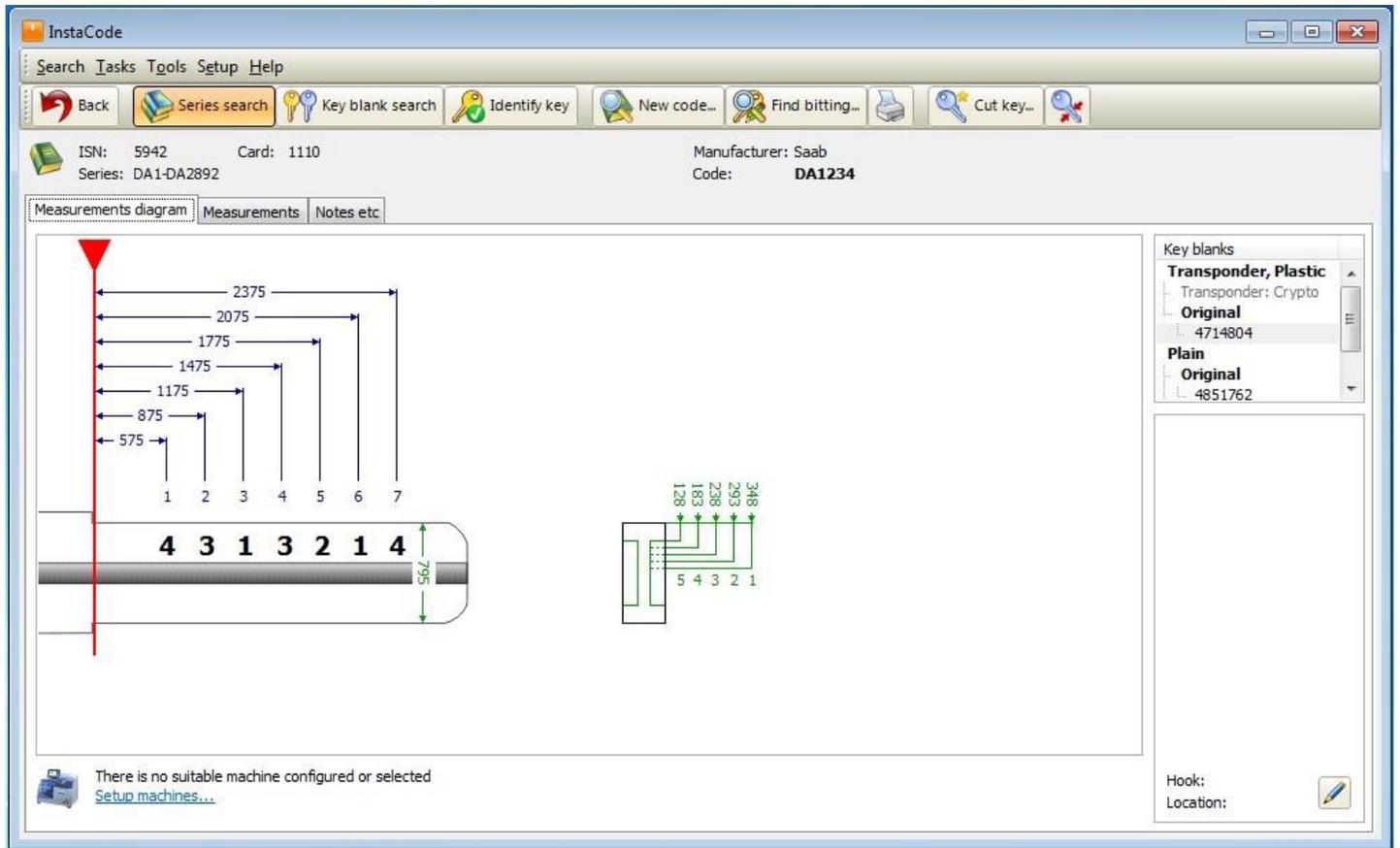
Genericode displays 7 cuts in both the left and right tracks. Look back at the Sidewinder Key Specs reference. To determine which positions have tumblers contacting the right track, simply drop the first position and use the remaining 7.

4 3 1 3 2 1 4
2 3 5 3 4 5 2

The depth values underlined are the ones you will enter into the boxes in your LKP software, with the exception of adding a random number, such as a 3 in the first box.

2 3 1 3 4 5 4

Again, if you are using a code program that only displays the left track depths, just as with the DB code series, you must decipher the cut depths of the positions which have tumblers that contact the right track. Remember that the left and right track cut depths for any given position must add up to 6.



For the DA code series you must determine the right track cut depths in positions 1, 2, 5 & 6.

4 3 1 3 2 1 4
2 3 4 5

The depth values underlined are the ones you will enter into the boxes in your LKP software, with the exception of adding a random number, such as a 3 in the first box.

2 3 1 3 4 5 4