



HOMEGROWN GRAIN SKATEBOARD GUIDE

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1. Getting Started

Introduction

Grain Surfboards, based out of York, Maine and Amagansett, New York, is dedicated to the sustainable building and shaping of wooden surfboards and skateboards. We hope you enjoy the process of making your very own skateboard as much as we enjoy teaching it!

Each skateboard in this homegrown skateboard kit was pressed in-house at Grain Surfboards in New York. The skateboards are comprised of maple veneers on the inside with an alternating pattern of straight and cross grain for balanced strength and flex. The tops and bottoms have decorative veneers with decorative stringers down the middle. Wood glue is used as the adhesive that maintains the shape of the board after it is removed from our press.

In addition to this pre-pressed skateboard deck, we have also traced out our recommended shape on the bottom of this skateboard deck, as well as provided a stencil for you to trace out your truck holes. We will go into more detail with this in the following sections.

Materials & Tools

Cutting:

- Band saw (if available)
- Jig saw (optional)

Shaping:

- Spoke shave
- Hand plane
- 80 grit sandpaper
- 120 grit sandpaper
- Belt sander (if available)

Truck Installation

- Power Drill
- Awl
- 3/16 drill bit
- Countersink bit
- Skate Tool

Finishing

- Water based finish (provided)
- 220 grit sandpaper
- Grip Tape

2. The Shape

Tracing the Shape

As mentioned above, we have already traced out our recommended shape onto the bottom of your deck. However, if you'd like to customize your shape, feel free to go ahead while keeping a couple of things in mind.

1. **ALWAYS** trace the shape on the bottom of the deck.



NOTE: the bottom of the deck is considered to be the “show” side of this board due to the fact that the top of the deck is going to get covered with grip tape.

2. When designing your shape only make a template for **ONE** side (half) of the board. Align the template with the stringer(s) at the center of the board. Use the same template for each side to maintain symmetry.

NOTE: for a wider shape, move the stencil further out from the center stringer.

Cutting the Shape

After you are content with the shape of your skateboard you are ready to begin cutting out the shape. When cutting out the shape, be sure to keep a couple of things in mind.

1. Try not to bring the blade inside the line you traced out as it will be difficult to mend that mistake in the following steps.
2. To avoid this mistake, make your cut about 1/16” outside of your line.

NOTE: If using a bandsaw, take note of the contours of the deck and keep the cutting section as flat as possible. If using a jigsaw, keep the blank clamped down to avoid shaking and uneven cuts

After the shape has been cut out, you are ready to clean up the shape with either a hand plane or a belt sander. A belt sander will be preferable here, however a hand plane will get the job done. Here, bring the edges of the board to a place that you are comfortable with. Try to maintain a perpendicular “wall” on the outside edge during this process, as it provides an even starting point when you begin shaping the roundover of the rails.



Perpendicular edge

3. Truck Holes

After the shape has been cut out you are ready to lay out the truck holes. Before you start, be sure to keep in mind that this step will drastically influence the way your skateboard will ride. So, pay close attention to the details of this step.

Use the truck placement template included with your kit. This should be taped to the bottom of your deck. Check that the truck holes line up with the template.

After you have checked these dimensions you may proceed to the following steps.

BRIXHAM: The front holes for this shape should be 1.5 in from the nose of the board and the back holes for this shape should be 20 in from the nose of the board.

CIDER HILL: The front holes for this shape should be 3.25 in from the nose of the board and the back holes for this shape should be 32 in from the nose of the board.

XL: The front holes for this shape should be 3.25 in from the nose of the board and the back holes for this shape should be 35 in from the nose of the board.

1. Cut the truck placement template so you can line up the center line with the center line of your deck.
2. Lay the template down on the **BOTTOM** of the board, lining up the templates's center line with the center stringer of your board.
3. Secure your template with tape and gently poke through the holes into your deck with a sharp pencil or awl .

4. General rule of woodworking: Measure twice, cut once. Take a pair of trucks and put them on top of your marks to make sure everything lines up and is on center before proceeding.
5. Mark these holes deeper with an awl . You can do this by taking any sharp, pointy object and a hammer or mallet and making marks by hitting the pointy object with the hammer or mallet. This indentation will help keep the drill bit from drifting.
6. Take a scrap piece of wood (or a piece of the deck that you cut out in part 3 of this manual) and clamp it as a backer behind your marked holes so that there is minimal tear out when you drill through the board.
7. Take a 3/16” drill bit and drill through all of your marked holes. A 7/32” drill bit will give you a little more wiggle room during installation. Make sure to keep the bit perpendicular to the board at all times so that you don’t make it harder on yourself to install your trucks.
8. Flip the board over and use a countersink bit to countersink all of the holes you just made on the top of your deck. Check that your countersink has been done well by putting one of the truck screws into the hole and seeing that the head of the bolt is close to flush with the surface of the board. The truck bolt should pull flush during final tightening.

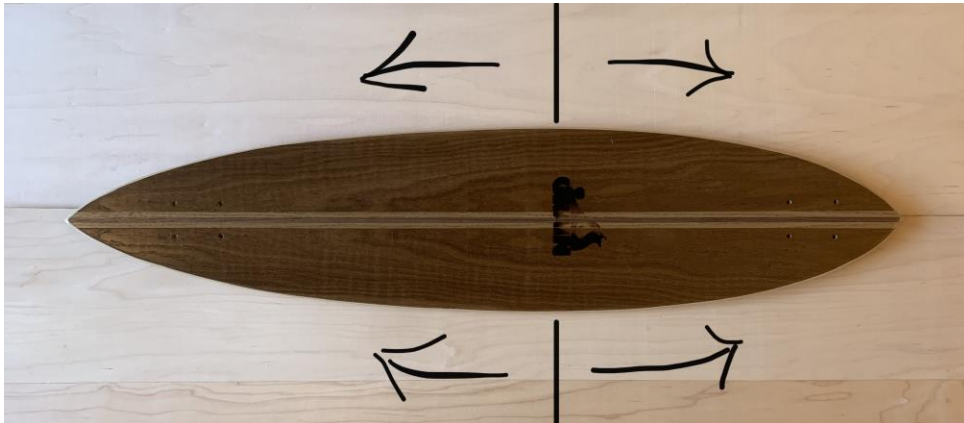
4. Shaping the Board

Rails

After the truck holes have been drilled out and counter sunk you are ready to shape the rails. We have provided an example of how we shape our own rails, however, feel free to shape the rails as much or as little as possible.

Before shaping, make sure that your board is clamped down with two clamps so that the board doesn’t move while shaping. The following steps are to be performed on each side of the top and bottom of the deck.

1. **ALWAYS** shape “downhill”. This means that you want to shape with the grain from the widest point of the board towards the narrowest point of the board. This process can be seen in the figure below.



The reason for shaping in this direction has to do with the grain of the exterior veneers. By shaping “downhill” you are shaving the fibers of that grain down, whereas if you were to run a blade in the opposite direction the blade will likely catch those fibers which could lead to a tearing cut, rather than a smooth shaving cut.

2. Start first by making long passes with a hand plane or spoke shave, maintaining the same angle for all passes, roughly at 45° until you are about two layers deep, top and bottom, as seen in the figure below:



3. Once you have taken the rail down to your liking, start to round out the rails by adjusting the angle of your spoke shave or hand plane. This is a good time to dial the blades back, as most of the material has been removed at this point, and from here on out you will be fine-tuning.

Sanding

Once you are comfortable with how your rails look, you can move onto sanding the board. Start first with 80 grit sandpaper and then move onto 120 grit sandpaper. If you’re using an electric

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sander, be careful not to sand through the thin top and bottom veneers. The decorative veneers are only 1/32" thick and it is recommended you sand by hand.

1. Always sand **WITH** the grain (tip to tail), any angle side to side or circular can leave scratches behind.
2. Make sure you remove any tear-out on the truck holes with the sandpaper.
3. Also be sure to sand the rails of your skateboard in addition to the top and bottom of your deck.

5. Finishing the Board

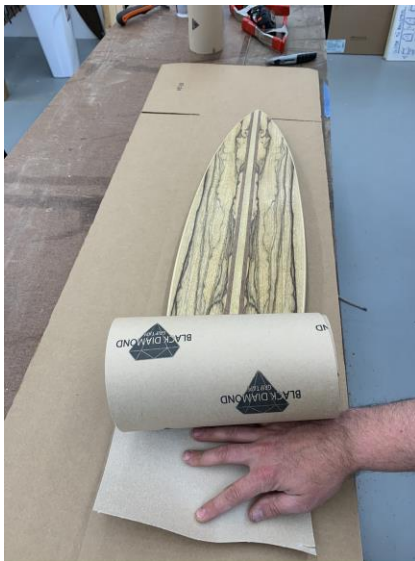
See attached included finishing guide.

6. Grip Tape

<https://www.youtube.com/watch?v=-4YFHtseTvI>

Grip Tape Application

Find a clear flat surface on which to work. The adhesive of the grip tape is very strong; you want to avoid dust and dirt especially, but clear the working area of anything the adhesive might stick to.



Start by laying out your roll of griptape with the backing on, making sure it all lines up and covers the entire surface of your deck. Note where the edge of the griptape falls past the nose or

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tail. Keep this in position and especially in line, ensuring it will land in the right places when you begin to roll it out.

The danger area is in the middle of the board. We will apply the grip tape from one end to the other.

***It is extremely important you are keeping the roll straight so that overhangs the rail--it is possible a slip with knock this alignment off and the grip tape is very difficult to peel up once it is applied



Once you're confident with your alignment, peel back a small portion of the grip tape from one end. Press enough of the tape down to hold it on. If you have a roller as shown here, use that to roll out the grip tape from the middle out. This pushes air bubbles to the edge and out. If you do not have a roller, you can use a set of trucks with wheels attached to accomplish the same effect. This is important for adhesion but also for aesthetic purposes, especially with clear grip tape as shown here



Continue this process down the length of the deck. Peel back a few inches at a time, roll it out, pressing the air bubbles to the edge and off the rails.

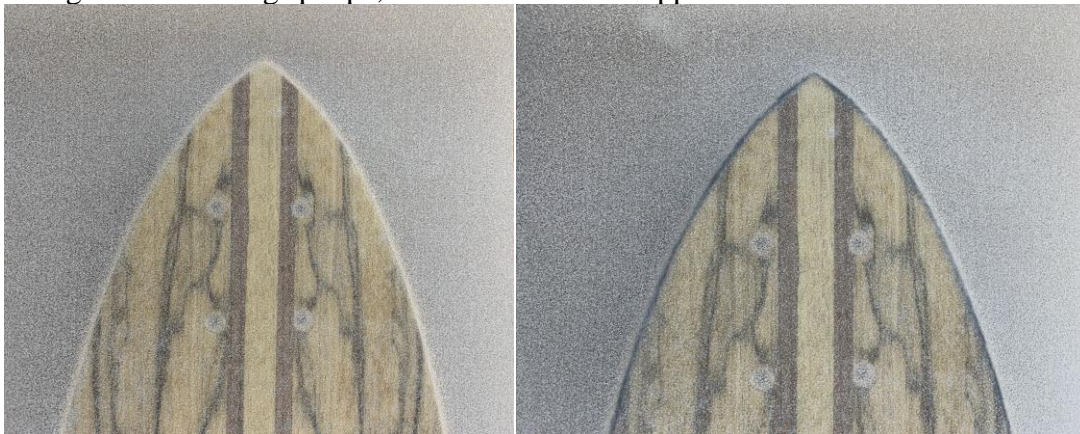
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****DO NOT roll the tape over the rails****



At the end your deck should be fully rolled out, free of air bubbles and completely adhered to the surface. There should be grip tape hanging off the deck over the rails

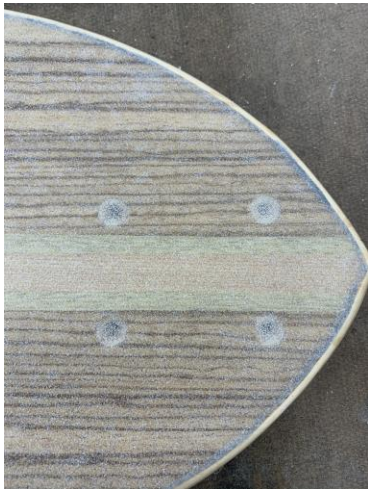
Once you have the tape applied, you'll have to cut off the excess. In order to do this you'll need a razor knife and a screwdriver. First, take your screwdriver and score the edge of the tape right over the rails by rubbing the shank of the screwdriver along the edge of the deck, where the overhang meets the deck. With clear grip tape, a dark border will appear when you've rubbed enough. With black grip tape, a white border will appear. Before and after shots below:



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Doing this scoring with the screwdriver helps give the razor knife an easier track to slice off the excess grip tape. Now, take your razor knife (DO NOT use a regular knife-the grip tape is notoriously rough of a blade and will dull the edge) holding board up at an angle so that you can approach the cut from below the overhang. Holding your blade against the rail, angled pretty steeply towards the deck, run the razor knife in as smooth a fashion as possible along the scored edge of the grip tape. Move with confidence-it is easier to get a smooth cut by keeping the blade moving rather than making starts and stops with the cut.

It is recommended you watch a youtube video of this process just to see how this motion is completed smoothly.



Smooth edge, clean lines. All that's left is to remove the grip tape above the truck holes. Fully cut these out, do not simply drill a hole in the tape-if you leave too much grip tape around these holes the bolts from the trucks will either be stuck above the tape itself, or push the tape up and off causing an air bubble in the tape that can spread.

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Cut a slot and bring the knife to the edge of the countersunk bolt hole



Hold the knife fairly flat to reach the very edge of the countersunk hole. Work your way around until the hole is completely uncovered as shown below



Repeat for all the bolt holes and then you're ready to install the trucks!

7. Installing Reverse Kingpin Trucks

As mentioned before, longboard trucks are mounted in the opposite direction of your typical park skateboard truck thus the name Reverse Kingpin trucks. What this means is that the kingpin (the big bolt that holds the “axle” of the truck onto the base of the truck) is facing out.

This is extremely important, if you mount these wrong the board won't function properly. Mount the trucks in this orientation:



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To start the process, push your bolts through the now clear holes in the deck and flip it over. Align your trucks with the bolts and push the truck flat against the surface of the bottom. If your holes weren't drilled perfectly straight up-and-down you may have to back off a bolt or two in order to flush the trucks with the deck. It may take a little elbow grease, but you will be able to get the bolts through and the truck flush.



Fasten the nuts onto the bolts and tighten down. You want these to be nice and snug, but be careful not to strip the bolt when tightening. Repeat for the second truck, remembering to face the kingpin out

Putting Wheels on Trucks

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When attaching the wheels onto the trucks there are a few details to pay attention to. Here we will walk you through this.



On each side of each truck there are two washers and a nut. Remove the nut and one washer,



leaving the inner-most washer on the shaft.

For each wheel you'll need two bearings and one spacer



Press the first bearing in from one side and do your best to push it in completely, flushing the surface of the bearing with the inside of the wheel.

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Flip the wheel over and drop the spacer inside, making sure it stays upright. This spacer gives the shaft of the truck a more robust setting and prolongs the life of your bearings. Once you get the spacer in and upright, push in the second bearing, nesting the spacer inside.



Flip the deck on its side so that the truck shafts are facing up-this makes it easier to align the spacer onto the shaft when putting the wheel on. Once the wheel is on, put on the washer you removed and cap it with the nut.

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Put on the nut, and tighten it down as far as you can so that you ensure the bearings are fully pushed in. Then, while spinning the wheel, loosen the nut just enough so that the wheel spins freely.

You want this nut to be tight but not too tight.

Repeat the process for all four wheels.



Your deck is complete! Go shred!