

## METHOD 1: QuickSet INSTALLATION METHOD

The QuickSet foam installation guide was designed to make installing FCS plugs quicker and easier.

### FEATURES INCLUDE:

- Location point for center punch;
- Drilling guide for holesaw, borer bit and tube and H-pattern tool;
- Resin dam for easy pouring of resin; and
- Removable adhesive backing for quick removal leaving no glue residues.

1) Prepare surfboard and QuickSet.

Wipe over the installation area to remove any dust and particles. This will ensure the QuickSet will correctly adhere to the surface.

Peel the backing paper off the QuickSet. The two ~30mm circular shapes should retain their backing paper.

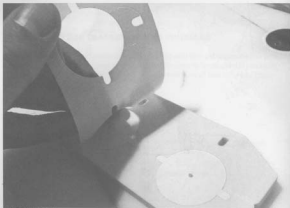


DIAGRAM 5

2) Position the QuickSet

With the extended lines drawn onto the board, apply the QuickSets.

Align indents of QuickSet with the shaper's marks. The rear indent of the QuickSet needs to be positioned exactly on the rear shaper's dot.

There are two QuickSet guides – one for RAIL installations and one for CENTER installations. It is important not to mix them up.

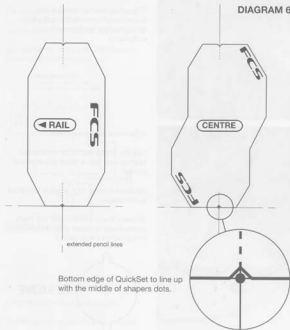


DIAGRAM 6

DIAGRAM 7



3) Mark the centers.

Use center punch to make holes in the surfboard. This will provide a location point for the center drill of the holesaw. Combined with the circular perimeter of the foam QuickSet, this will ensure the hole you drill into the surfboard is highly accurate.

(The small insertion holes in the QuickSet will prevent the spike tool from intruding too far into the surfboard.)

4) Remove the center foam.

Use the center punch to remove the foam circles with a 'stab and flick out' motion.

Be careful not to lift the entire QuickSet at this stage.

(These circular bits will pop out easily as the backing paper should have remained on these parts.)



DIAGRAM 8

8

5) Use the holesaw.

Fix the depth guide on the holesaw at 24mm (normally 19mm) due to the thickness of the foam.

Using the holesaw tool, carefully drill six holes vertically. Drill until the depth guide touches the foam.

For center holes, it may be necessary to remove the center drill to ensure you do not pierce the deck of the surfboard.

Be careful not to lift the QuickSet on removal of the holesaw.

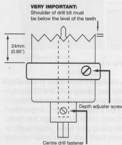


DIAGRAM 10

6) Remove the fiberglass circles.

Use the center punch to pick out and

DIAGRAM 9



DIAGRAM 11

9

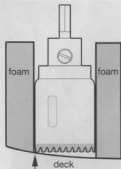
DIAGRAM 12



7) Use the borer bit.

Place the steel tube into holes as far as possible without further depressing the foam.

Using the borer bit, drill out the center of the six holes using the steel tube as a guide. The borer bit's top guide will stop it at correct depth – the same depth as the steel tube.



8) Use the H-pattern tool.

Fit the H-pattern tool to the drill and drill carefully and slowly until the bit gently scrapes against the underside of the deck. Don't press too hard, as the H-pattern tool could go through the deck. You can place your hand underneath to get better feedback upon initial contact with the deck surface.

DO NOT H-PATTERN the center plug holes if the board has a center stringer. The installation will bond to the stringer and effectively provide the strength that the H-pattern would have.

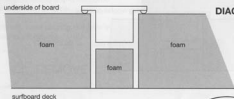
DIAGRAM 13

9) Use the hand scribe tool.

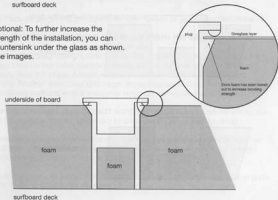
**IMPORTANT:** Remove the H-pattern tool to scrape away residue foam at the bottom of the hole to expose the inner fiberglass surface. A circular shadow **MUST** be visible from the deck.

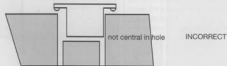
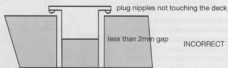
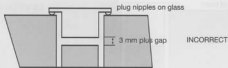
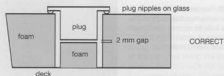


DIAGRAM 15



Optional: To further increase the strength of the installation, you can countersink under the glass as shown. See images.





10) Check plug depth.

Place a plug in a hole to check that the holes created are correct. The 'outriggers' on the plug should touch the fiberglass surface.

11) Remove the foam resin dams of the QuickSet

Flick out the resin dams of the QuickSet. They have been held in position with perforated sections and will come out with minimal force.

(This will make pouring the resin into the holes much easier.)



12) Place six plugs onto the dummy fin jigs. Position on jigs as per **DIAGRAM 18**.

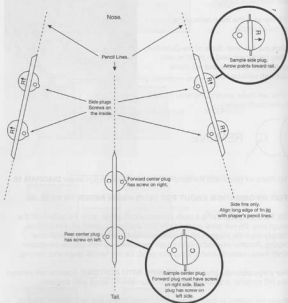
#### FOR INFORMATION ABOUT FCS PLUG RESIN REFER TO PAGE 30

13) **For PVC plug:** Using a cloth soaked with acetone, wipe the outside of the plugs only. Do not allow acetone into slot and do not soak plugs in acetone. Simply wipe the plugs. A black residue should be visible on the cloth after wiping. Another alternative is to rough the surface up with coarse sandpaper. Both these methods enable a superior bond. Do not handle plugs after treating.

**For polycarbonate plug: DO NOT WIPE WITH ACETONE!** Acetone will weaken the PC material. It is not necessary to clean the PC plugs with anything.

If you are looking to improve the bond between plug and resin further, internal FCS testing has shown that wiping with styrene improves the chemical bond noticeably with both PVC and PC plugs.

14) Place plastic fin jigs into position and hold at correct angle with tape or putty (T-9). Refer to **DIAGRAM 19**. **Note:** plugs must sit flat on the surfboard.



## 15) Polyester resin around the plugs

One of two resin systems can be used to install FCS Plugs:

a. FCS premixed plug resin – FCS has developed their own plug resin for the installation of their system (see next page). This has been designed to increase strength and speed up installation time. The FCS resin has a plastic bonding additive, white pigment for colour and anti-shrink properties. The only items you need to add to the FCS Plug Resin are MEKP (1%-2% depending on conditions) and Fiberglass Powder (10%-volume).

b. Other polyester resin systems - Use the following formula to install 6x plugs into 1x board:

- 100 ml Polyester Resin (using measuring cup T-12)
- Fiberglass Powder – 10% by volume.
- White Pigment
- MEKP – enough to give 20 minute gel time.

**IMPORTANT – Do not thin resin system with styrene!**

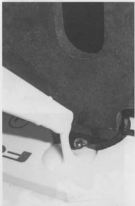
16) Place two wet sponges/rags under each side fin area to prevent possible overheating and discolouration.

**IMPORTANT GENERAL POINTS**

- Do not use styrene to thin resin. It has an adverse effect on the resin/PVC bond.
- Do not allow resin to gel either too quickly (hot mix) or too slowly. Both can result in a poor installation. 20 minutes is optimum.
- All resins work best when used in warm consistent temperatures. For strongest bonding between plugs and resin, install at temperatures above 17°C. Avoid installing plugs in cold temperatures.



DIAGRAM 20



17) Pour resin into a squeeze bottle (tool no. T-10) and slowly pour into the holes. The QuickSet arrangement will allow air to escape as resin can only enter from one side. Fill until there is sufficient resin around the plug and pop any bubbles which appear. Check the resin level after 10 minutes to ensure it hasn't soaked through or drained out.

18) For best results allow resin to cure for at least 12 hours before removing jigs.



DIAGRAM 21

## INSTRUCTIONS FOR SANDING - QUICKSET INSTALLATION METHOD

The QuickSet foam installation guides have a removable adhesive on the side in contact with the surfboard. They can be lifted and removed leaving no glue residue prior to sanding. Do this now.



DIAGRAM 22

With the FCS key (tool T-14), wind the grub screws down well below sanding level.

Don't over heat plugs when sanding.

Firstly use a coarse/heavy (approximately 40 grit) sanding disc to remove bulk of material. Avoid over heating by turning sanding machine on and off while sanding.

Proceed to finish sanding the surfboard in usual manner.

**CLEAN OUT SCREWS OF ALL SANDING RESIDUE** to eliminate key fitting problems. There must be no residue left in the screws or fin slots. Key must fit into screw hole to correct depth.

After sanding, the plug slot and top of screw hole may have some sanding burs which will need to be easily removed using a sharp blade or deburring tool.

Deck sticker can be fitted to cover up circle shadows on deck.

**This is the end of the QuickSet installation method.**