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Soffits Running Up Hill:

Soffits under overhangs at gable ends, if vented to the attic, are almost certain to allow water to enter attic spaces even in rather mild storms because there is no water dam to stop the wind driven rain. Not all overhangs at gable ends are actually vented to the attic. You can check easily by looking for daylight along the top edge of the gable end from within the attic. If you do see daylight, then you really do need to address this issue. If there are just cracks you can caulk them. If there are bigger gaps, like the 3 ½" gaps that occur between the framing members of an outrigger system, then you can cut aluminum to fill the space. Because you will likely not be able to make water tight fits with the aluminum you need to caulk between the aluminum and wood to make the seams water tight.



Sketch of gable roof structure with Note aluminum flashing installed and outrigger system showing water entry caulked to block water entry during point through gable soffit vent hurricane

(click image for larger version)



(click image for larger version)

Soffits Running Horizontally:

Keeping soffits in place can also help keep water out of your house. In general, solid soffits made of plywood or other solid panel material have not been observed to be as great a problem as light weight vinyl or aluminum soffits, particularly if they are coated with a cement based coating or do not show signs of damage or decay.

About 75 percent of houses with aluminum and vinyl soffit that were impacted by the highest winds of the 2004 hurricanes, lost soffit material along the eaves. This resulted in lots of additional water getting into people's homes. Properly installed soffits should stay in place in most conditions. However, it is difficult to determine whether they have been installed according to the manufacturer's recommendations and with enough appropriate fasteners. Some have wood supports but the soffit material is



Soffit damage was widespread - this photo shows both fascia cover and wall track damage

(click image for larger version)

not adequately fastened to the wood. More often, no wood backing is installed and the vinyl or aluminum channels are inadequately stapled or nailed to the wall.

In most areas of Florida, light weight vinyl or aluminum soffits are not installed according to the manufacture's instructions. For this reason we suggest that you test the soffit system to try to determine if yours has been installed properly. For example, from a ladder, inspect the connection at the wall and at the fascia board, measure the width of the soffit and if the soffit is more than 18 inches wide, push up on the middle of the soffit to determine whether it makes contact with a wood support structure. If you have an older house, it is possible that the vinyl or aluminum soffit was installed over an existing wooden soffit as part of a residing project. If this is the case, you don't need to worry about the anchorage of the soffit material, but you may still want to check the anchorage of the fascia cover as outlined below.

Check the connection of the soffit system to the wall of the house. Vinyl and aluminum soffit panels can be pulled down or pushed up by wind pressures and they can pop out if they bend too much, if the trim at the wall rotates or breaks loose or some combination of these factors. Start by pushing up on the middle of the soffit panel while watching the trim. If the trim rotates a noticeable amount, it is likely that there is no wood above the trim. If it doesn't rotate very much, then it is likely that there is wood above the trim or that it is well attached to the house. Now, pull down on the edge of the trim to see if it is attached to the wood above (assuming it didn't rotate much when you pushed up) or to the wall. For a 12" wide soffit, each foot of soffit length only needs to be able to resist a downward force of about 20 pounds, so don't pull too hard.

Next check the soffit panels to determine how secure they seem to be. Can they be slipped away from and towards the house so that they fall out or nearly fall out? If so read farther down for a solution. Now check how the soffit is connected to the eave. This may be a bit harder to inspect and even harder to determine the adequacy of the connection because in some instances the ends will be covered by what is called a fascia cover or wrap made of aluminum or vinyl. Gently pull down on the fascia cover so that you can see the ends of the soffit panels. Sometimes soffit panels are nailed or stapled to the fascia board. That is probably a good sign if the staples are not too corroded and if the staples are substantial enough (that is much heftier than the kind use to fasten papers). If there is a fascia cover or wrap it likely plays an important roll in preventing soffit panels from getting pulled off the house by negative air pressures that occur when the wind is blowing around the corner of the house. Until the hurricanes of 2004, soffits had not received much attention and were not thought to be very important. Not important because they were under a roof. In any case fascia covers usually play a key roll in keeping the fascia ends of soffit panels in place so it is important that fascia covers are securely installed, which usually they are not. A "good" fascia cover installation will have one tiny nail on the big face of the fascia cover once every 12 feet and on the bottom 2" edge, about every 12". Even this "good" fastening is not good enough in a hurricane unless the soffit panels are well fastened directly to the fascia board.

The good news in all of this is that there are solutions that most homeowner who feel safe and comfortable on ladders can implement with suitable caulk and a screw gun. The goal is to tie the soffit parts together so they act as a unit to limit one weak part from starting a general failure. Caulk/sealant is the tying mechanism. Urethane sealant, though a bit messy to use, has the adhesive qualities needed to tie parts together plus it is available in a variety of colors. However, be warned about white caulking. Regular white urethane caulk will yellow within just a few weeks. So for white you need a urethane product formulated to resist yellowing. Such formulations are not typically available at other than specialty stores that cater to contractors or you might find them at some paint stores. Another term used to describe non-yellowing sealants is hybrid urethane or siliconized urethane.

Retrofit Options for Soffits Running Horizontally:

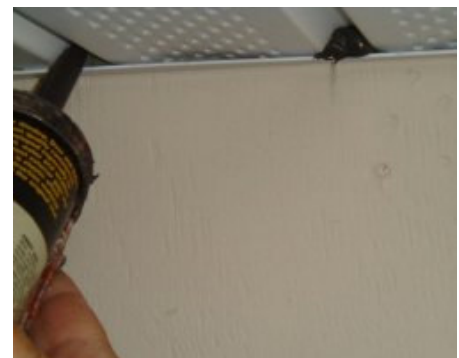
If you suspect that the trim piece against the house is not well secured to the wall you can caulk the bottom of the trim piece to the wall by applying a bead of caulk at the interface between the two. Ideally, you should not do what most of us want to do by pushing the caulk into a concave shape so it looks prettier because by doing so one is making the caulk thinner and therefore weaker. It does have the advantage of helping to assure that the sealant actually adheres to both the wall and the trim. Aside from improving the connection of the trim to the house, the sealant helps prevent the trim piece from rotating. This will help keep the soffit panel from popping out.



Caulking bottom edge of soffit wall J track to wall to improve anchorage of track - black caulk shown for contrast.

(click image for larger version)

To hold soffit panels in place one should squirt a dab of sealant about the size of large marble into the V-shape hole formed by the intersection of the soffit panels with the bottom edge of the trim into which the soffit panels are inserted. Do this where two soffit panels mate so that both are tied to the trim and they are tied to each other. To be effective the dab can't just sit there. It has to make good physical (adhesive) contact with both the soffit panels and the trim. To help assure this, you should push the point of the caulk tube into the joint until it hits the back of the trim. Then squirt the sealant in until it nearly wants to fall out of the trim, and then slowly continue inserting sealant while



Inserting dollop of urethane caulk to connect soffit panel to track

(click image for larger version)

simultaneously withdrawing the tip. When you have inserted all that is needed discontinue inserting sealant and quickly withdraw the tube. You may have a string of sealant to contend with. Use a bladed tool to push the sealant in and to make it look prettier. It will not be perfect, but at the distance one ordinarily sees it, the look will likely be just fine - especially after you have gotten practice. For this reason you might want to practice on a less conspicuous part of the house before working near the front door. If there is no trim piece at the fascia end, just the fascia cover, use the same technique described above. When you finish, you will have done all the caulking/sealing needed to hold the soffit panels in place.

If the fascia cover appears to be holding soffit panels in place instead of nails or staples driven into the fascia board, you may also want to install screws up through the fascia cover into the 1 1/2" edge of the fascia board. Screws spaced about 24" apart provide enough anchorage. When you install these screws they will pass through the fascia and the soffit panels. To provide the best anchorage install the screws were two soffit panels mate. That way you might be able to screw through both of them so that they are even better anchored to the house. You may be able to find powder coated screws painted white or bronze to match the color of the soffit fascia cover at your local home improvement store. If you found wood above the wall trim piece, but the trim rotated or pulled down, you can anchor it and the soffit panels to the wood by driving screw through the trim, the soffit panels and into the wood.



Screw inserted through edge of fascia cover, through soffit panels and into fascia board

(click image for larger version)



Screw installed through wall J channel and through soffit panel and hopefully into wood above - black caulk shown for contrast. You can usually find screws that also match trim color.

(click image for larger version)



(click image for larger version)

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