

## TECH NOTE #2

### TRUTH HARDWARE AWNING WINDOW PRODUCTS

Hardware for an awning window consists of two components - the operator and the hinge. Both of these items must be properly matched to insure optimum efficiency.

When choosing the operator for an awning window, remember that effective performance cannot be achieved if the angle of sash opening exceeds 45°. A smaller degree of opening will improve operation proportionately.

When designing or redesigning an awning window unit, here are a few points to remember about Truth Hardware's Awning Hinge line:

- The awning hinges are concealed hinges which give a smooth looking unit and provide improved tamper resistance.
- The hinge is designed so the sash drops down as it opens. The bottom edge of the sash remains in approximately the same plane as the window sill. This "drop" prevents undue upward bending of the operator arms.
- Use of a large or long extension operator on a short sash height can cause undue stress to the operator arms. This is caused by the operators inability to keep up with the quick rotation of a short sash. (See the operator table on page 1.1a for proper size information.)
- Proper sizing of the hinge will allow the window to counter-balance and make the opening and closing easier and without chatter. If the hinge is too small, the weight of the sash is concentrated "outside" the support arm and the window tends to "fall" closed. This causes chatter or bouncing when a crank operator is applied. (See the hinge table on page 1.1a for proper sizing information.)
- There is an adjustment screw that increases or decreases friction so the window can be adjusted to suit individual specifications.
- The hinge support arm has a quick detach clip. When detached, the sash can be easily removed from the window.

## **Tech Note #2: Truth Hardware Awning Window Products**

- This form of detach clip is required on awning window hinges. Under no circumstances should a casement hinge with snap stud detachment be used on awning windows. Due to the rotational forces applied by an awning sash, the snap stud can work its way apart allowing the sash to fall out.
- Corner pull-in has been a problem that the Truth Hardware Engineering Staff has addressed. Their recommendations have led to the development of our torsion bar, which is slightly curved to deflect the sash, to assure a tight seal at the corners of a wood awning window. This torsion bar is available with both the lever and awning roto gear operators. When the torsion bar is used, #8 x 1" screws are recommended to minimize screw strip-out. For problems with larger sash we carry a guide bar awning operator that will assure a tight seal. A sash lock at each corner will solve any sealing problems and significantly increase the amount of force necessary to pry the sash open from the outside.
- Adding a Truth Hardware Snubber to the center of the top rail on an awning window may increase the negative air pressure rating of the window.