5830 Skylight, Solar Smart Retrofit Installation

Introduction

The Solar Smart has a mounting bracket that allows the operator to rotate slightly to reduce wear and tear on the chain drive system for greater performance and reliability. Because of this rotation, existing 5830 model skylights must be modified to allow for the rotation and chain clearance. Modification involves uninstalling and disassembling the 5830 model skylight, removing the insect screen and screen pocket pieces, and replacing with a longer screen pocket pieces and a shorter insect screen; as well as replacing the current operator hardware with Solar Smart. Access to the skylight from the inside and the roof is required.

NOTE: The size of the skylight MUST be determined prior to ordering a Solar Smart Retrofit Kit in order to provide the correct sized new screen pocket pieces and insect screen. This can be determined by measuring the outside curb dimension that the current skylight is installed on, or by measuring the current skylight's insect screen.

Solar Smart Kit Includes

- Solar Smart Operator
- operator battery cover
- operator battery
- chain clip with release pin
- small flat head screw driver
- Remote
- remote battery cover
- (2) AA batteries
- wall mount attachment
- solar panel with wiring pigtail
- AC trickle charger
- stainless steel mounting bracket
- (2) stainless steel bracket tabs
- (4) stainless steel bolts
- (4) stainless steel nuts

Retrofit Kit Parts

- (2) Screen Pockets
- Insect Screen
- Clip Adapter
- Allen Wrench
- (3) 2" SS FH Fasteners
- (2) Machine Bolts
- (2) Lock Nuts
- (5) cable ties
- (5) adhesive tabs
- 3M High Bond Tape
- Black Rubber Sleeve

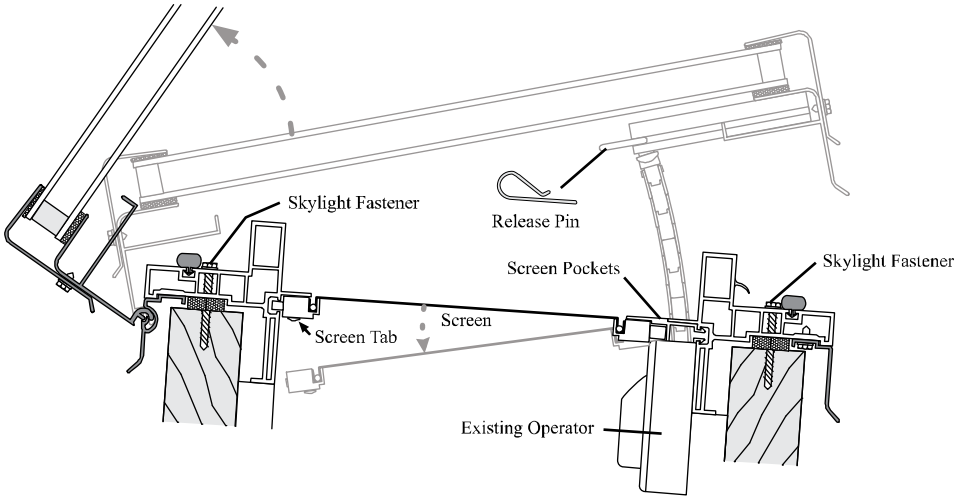
Further Items Needed

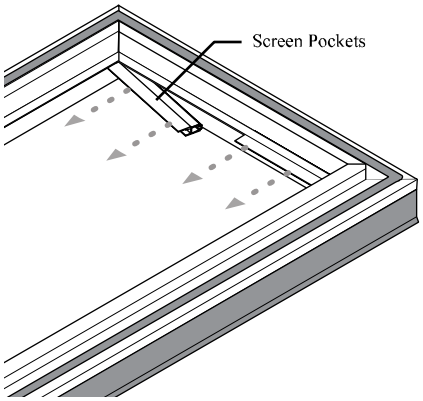
- Ladder
- Cordless Drill
- 1/8" Drill Bit
- 11/64" Drill Bit
- 19/64" Drill Bit
- 1/4" Hex Driver Bit
- 11/32" Box Wrench
- Phillips Screw Driver

Skylight Removal & Solar Smart Retrofit Installation

Skylight Removal & Disassembly

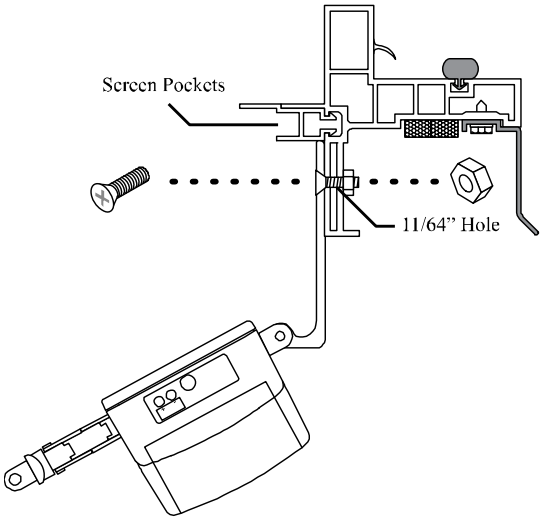
1. Fully open the skylight with current hardware.
2. Be sure to support the weight of the skylight lid and disconnect the current operator from the skylight lid by removing the pin.
3. Carefully rotate the skylight lid beyond 90 degrees to separate the lid from the skylight base frame, and place it to the side.
4. Remove the fasteners in the upper side of the base frame using the 1/4" hex driver bit, to unfasten from the skylight curb, then lift the base frame up.
5. Push the tabs in the upper corners on the skylight screen frame back to remove the screen.
6. Remove the existing operator hardware and fasteners.
7. Carefully remove the 2 pieces that make up the screen pocket. This will require strong but gentle force.

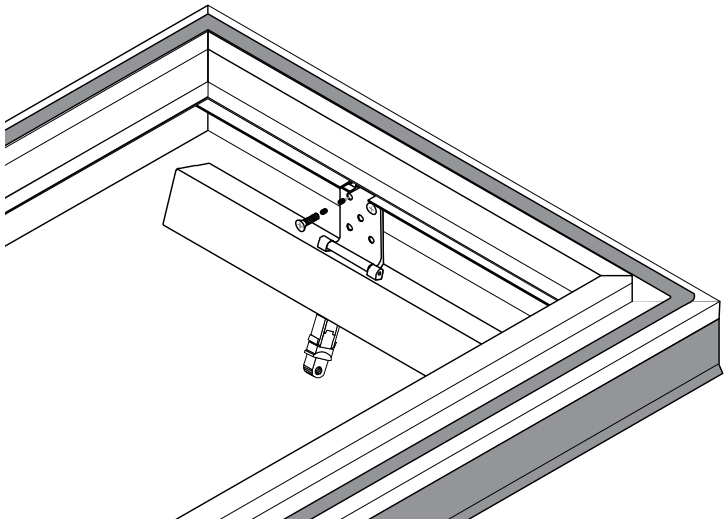




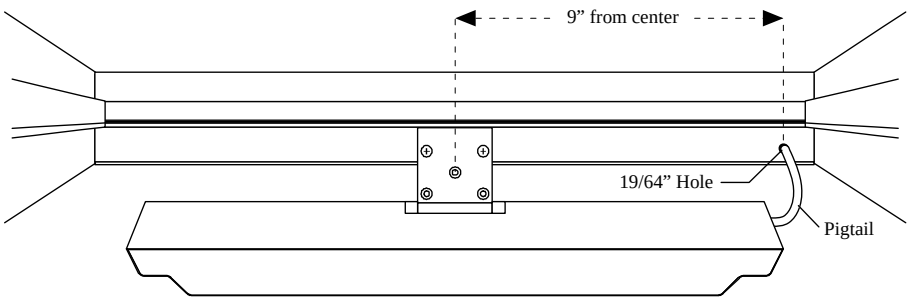
Solar Smart Retrofit

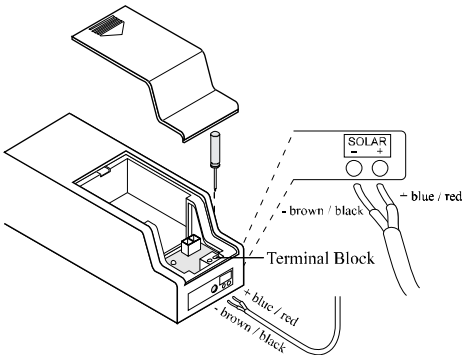
8. Snap into place the 2 new (longer) screen pocket pieces where you just removed the original.
9. Center the Solar Smart Operator on to the skylight sill and push the bracket up snug to the bottom of the screen pocket pieces.
10. Using the 11/64" bit, drill through the PVC base frame at the top two mounting bracket hole locations.
11. Use the provided machine bolts and lock nuts to fasten the operator to the base frame. The 11/32" box wrench and Phillips screw driver will be used here.



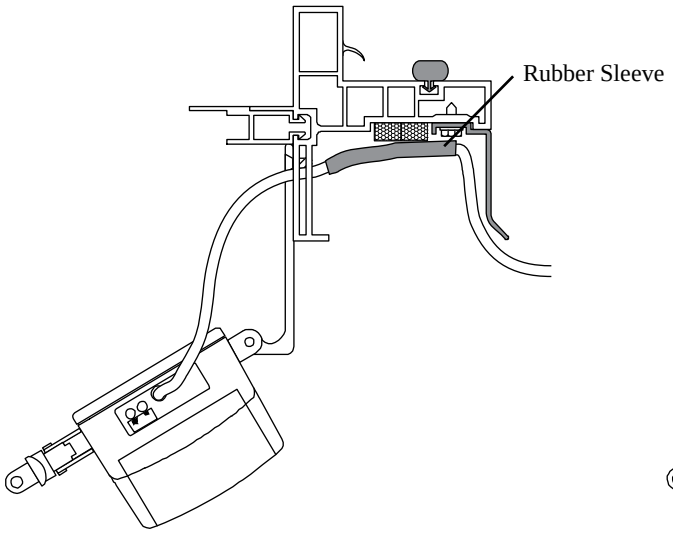


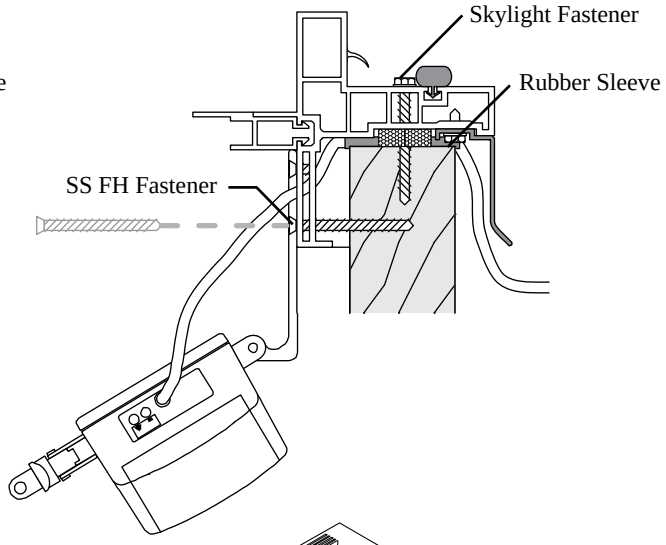
12. Using the 19/64" bit, drill through the PVC frame sill from the inside out, about 9" from center, just to the right of the final location of the Operator.
13. Slide the black rubber sleeve over the Solar Panel wire.
14. Feed the Solar Panel wire from the outside to the inside through this hole.
15. Wire the Solar Panel to the Operator as indicated on **Page 6** of the **Solar Smart Installation and User Manual**.
16. Pull the excess wire back to the outside of the skylight while leaving enough length to allow the Operator to remain connected when rotated down.



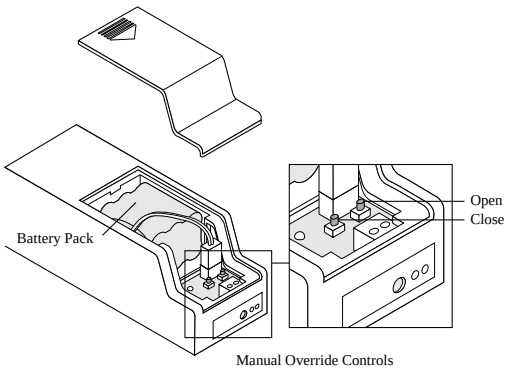


17. Place the skylight base frame back on to the curb. Try to maintain an equal reveal on all sides, centering the skylight on both directions. Move the black rubber sleeve to protect the Solar Panel wire where it will run over the top of the curb in-between the skylight. Push down on the base frame to compress the curb tape and secure the skylight to the top of the curb using the original fasteners at the pre-drilled holes of the base frame. Do not over tighten.
18. Use the supplied 2" SS FH fasteners to further secure the operator to the side of the skylight well, through the remaining holes of the mounting bracket.

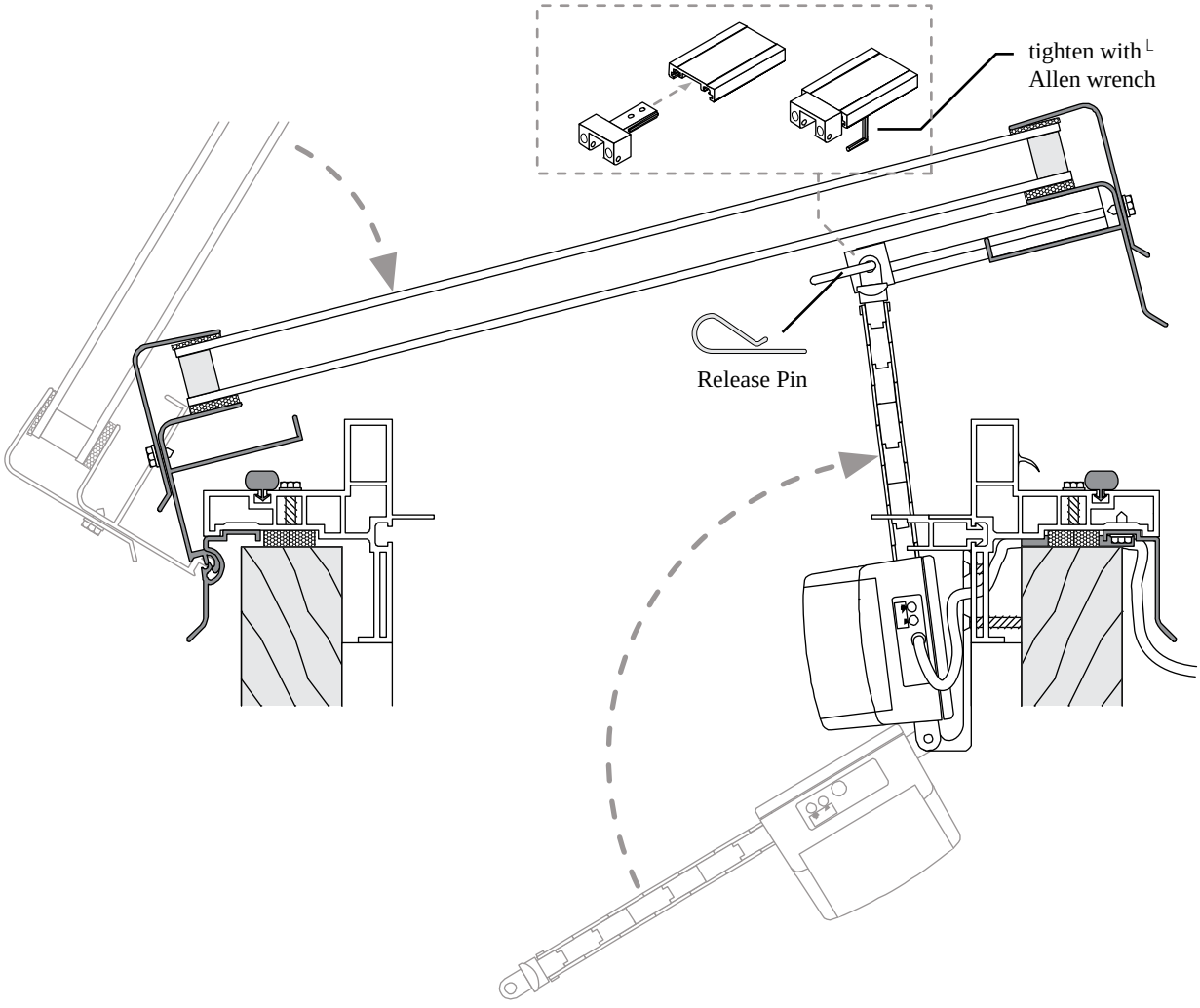




19. Remove the operator battery cover and plug the battery pack into the operator.
20. Inside the battery compartment, use the manual override buttons to run the operator to full open. Close the battery cover.



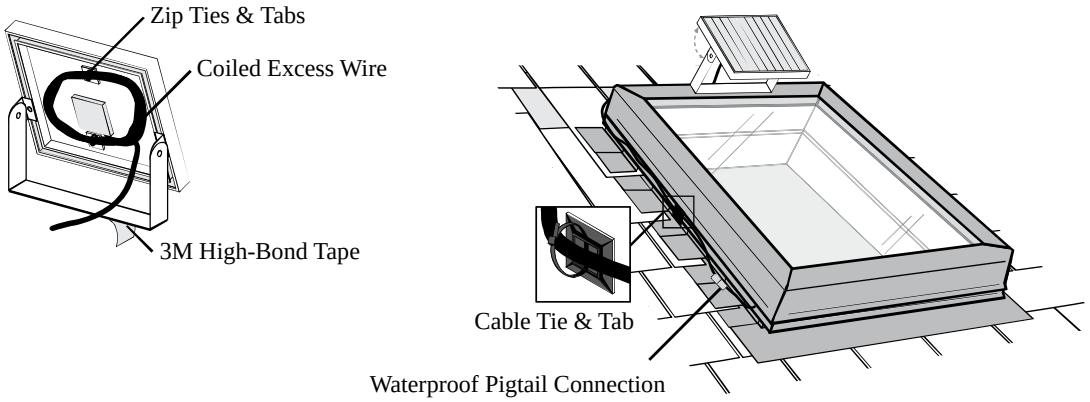
21. Insert the Clip Adapter to the existing clip on the skylight lid. Secure in place by tightening with the supplied Allen wrench.
22. Reattached the skylight lid to the base frame.
    a. Hold the skylight lid slightly past 90° to the base frame.
    b. Engage the hinge and slowly rotate the lid down. Do not force or bend the hinge.
23. Rotate the operator upright, lower the skylight lid, and connect the chain to the upper frame using the new provided Solar Smart release pin and adapter clip.
24. Remove the operator battery cover again and close the skylight with the manual override buttons; until not practical to close further with your hand reaching in from the outside. Use the override buttons to re-open the skylight. This process is to ensure that the skylight is still smoothly operable after installation. If it is not, check the hinge alignment or other debris possibly in the way.



Solar Panel Installation

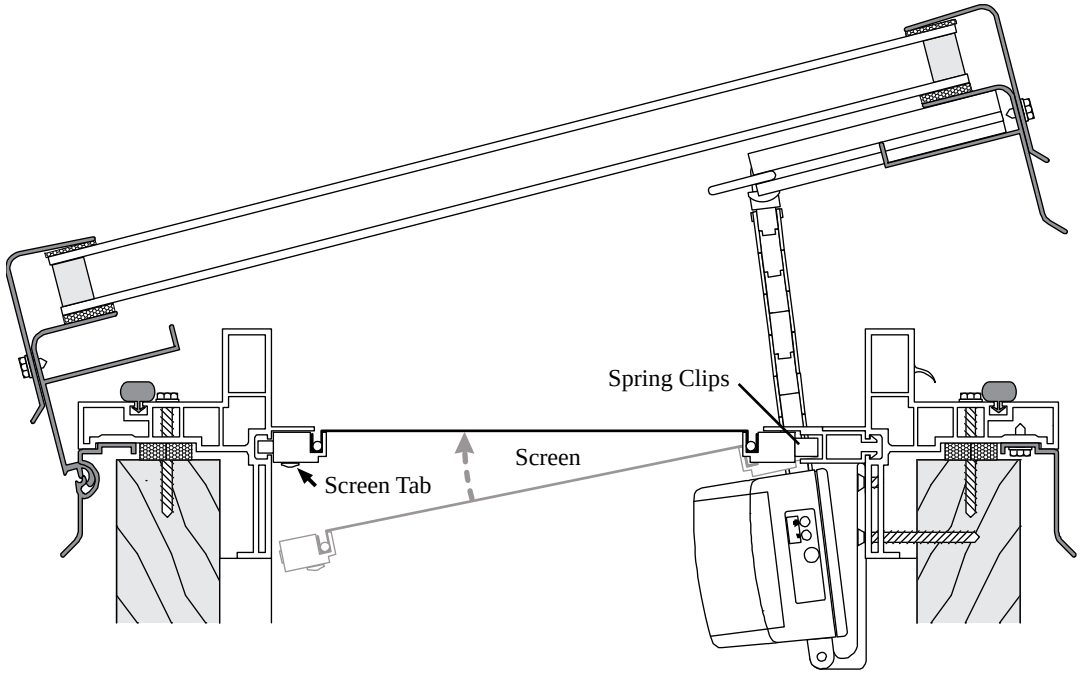
The solar panel is intended to be securely mounted to the upper surface of the skylight frame using the provided 3M high-bond tape, without any mechanical fasteners. Never screw or penetrate into the skylight frame or cap, doing so will void the warranty and likely cause failure of the skylight frame or glazing.

25. Determine the best location and angle for the solar panel to be mounted to maximize it to direct sunlight exposure. The solar panel is intended to be mounted to skylight frame using the 3M high-bond tape, but can be mounted elsewhere if required.
26. When mounting to the top of the skylight frame, thoroughly clean the surface and be sure to remove any moisture or dust.
27. Remove the backing of the 3M tape from the solar panel bracket and firmly press the bracket onto the skylight.
28. Angle the solar panel as required for maximum Sun exposure and tighten the fasteners which hold it the solar panel bracket.
29. Secure the exposed wire to the base frame using the cable ties and adhesive tabs.
30. Coil the excess wire and secure it to the back of the solar panel using the cable ties and adhesive tabs.



Interior Final Procedures

31. From the interior, install the new insect screen and push the tabs forward to secure into place into the new screen pocket pieces.



32. Refer now to the **Solar Smart Installation and User** to pair the Remote to the Operator and for advanced settings information.