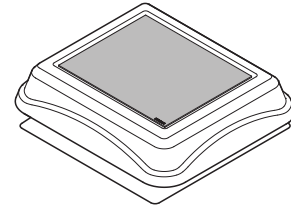


ROOF-MOUNT SOLAR POWERED ATTIC VENTILATOR



READ AND SAVE THESE INSTRUCTIONS

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, disable the ventilator by covering the solar panel with cardboard or disconnecting the wires from the motor terminals (note wire locations when disconnecting).
3. Installation work must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. If removing an existing 120 VAC powered attic ventilator, use only a qualified person(s) to remove any electrical wiring in accordance with all applicable codes and standards.
5. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
6. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. This unit has an unguarded impeller. Do not use in locations readily accessible to people or animals.
4. This ventilator operates when the solar panel is exposed to sun light. To reduce risk of injury while installing, servicing or cleaning unit, cover the solar panel with cardboard or disconnect the wires from the motor terminals (note wire locations when disconnecting).
5. The recommended open air inlet for this ventilator is 2 square feet. The best location for these air intake vents are under the eaves with direct access to the attic. Failure to provide these intakes could cause natural-draft gas appliances to backdraft.
6. Your attic fan installation will create a screened opening into your attic space. During a heavy rain storm there could be a light spray of rain into this attic space. This is a normal condition with all attic ventilators and will not cause any damage to the structure. We recommend that you do not store any valuable articles directly under the fan opening in the roof.
7. This ventilator is intended for roof installation. Broan Models 353, 345GOBK & 345GOWW Gable Mount Ventilators are available for side wall applications.

CAUTION

8. The plastic ventilator dome and base may be painted with high quality paint. Follow the paint manufacturer's recommendations for acrylic and ABS plastic as appropriate. Take care to avoid getting paint on the solar panel.
9. This ventilator includes a permanently lubricated motor. Do not oil or disassemble.
10. The installation instructions contained in this document are only a recommendation and individual professionals may have their own methods of installation. If your roof has an existing warranty, installation of this product by anyone other than those who installed the roof may jeopardize any future warranty claim. Please check with the original installer of your roof if this is a concern.
11. When working with asphalt shingles in cold weather (below 40°F), take care to avoid damage to the shingle edges and corners.
12. For installations in climates where cold weather condensation is not a concern, Broan Model CWT45 thermostat is available. It disconnects power to the motor when the temperature drops below 50°F. Power is applied to the motor when the temperature reaches 61°F.
13. The wearing of safety glasses and gloves is recommended when installing, maintaining or cleaning the unit to reduce the risk of injury that could be caused by the presence of thin metal and/or high moving parts.
14. If the fan makes excessive noise or if there is unusual noise or smells of smoke, disconnect power supply and contact customer service.

If this fan is to be used to ventilate a garage:

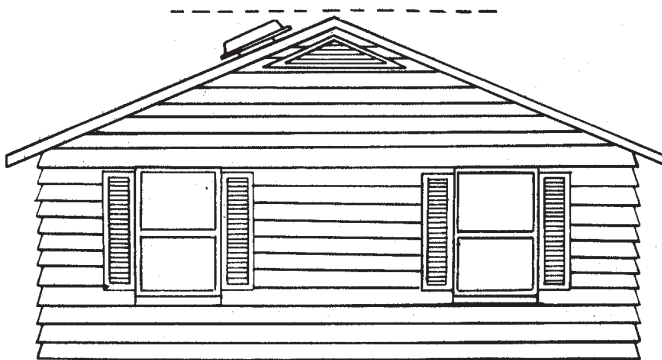
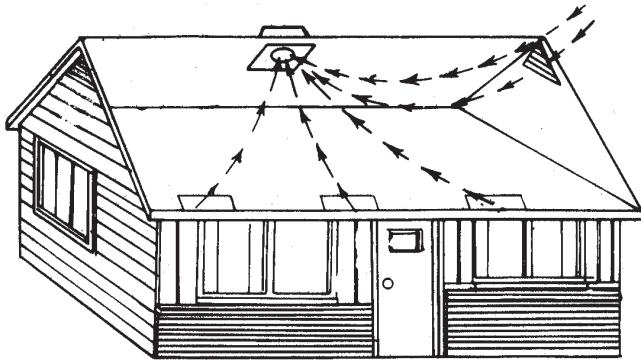
- A. Use only in single family, residential garages
- B. Install in a GFCI protected branch circuit
- C. To help offset the risk posed by high concentrations of vapors from paints, glues, solvents, and fuels, install fan at least 18 inches (0.5m) above the floor
- D. NEVER run a vehicle or use a fuel burning appliance inside of a garage. Deadly levels of carbon monoxide can build up in the area. Using this garage fan, or opening windows and doors, will NOT supply enough fresh air to eliminate the danger.
- E. Run regularly if exposed to salty air environments
- F. Extra cleaning may be required due to possible dirty surroundings

TOOLS AND MATERIALS REQUIRED

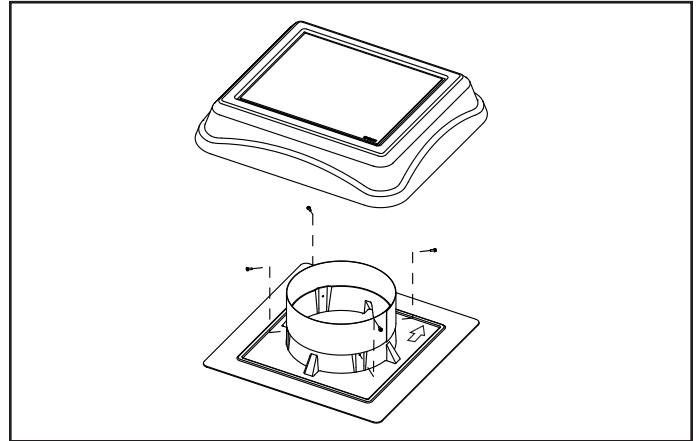
- | | |
|---|--|
| <input type="checkbox"/> Drill | <input type="checkbox"/> Pry Bar |
| <input type="checkbox"/> 1/4" Drill Bit | (to remove roofing nails) |
| <input type="checkbox"/> Sabre Saw or Keyhole Saw | <input type="checkbox"/> 5/16" Socket and |
| <input type="checkbox"/> Hammer | Extension |
| <input type="checkbox"/> Ruler / Tape Measure | <input type="checkbox"/> Roofing Cement |
| <input type="checkbox"/> Pencil, Marker or Scribe | <input type="checkbox"/> Galvanized #10 x 1" |
| <input type="checkbox"/> Utility Knife | Pancake Head Wood Screws |

INSTALLATION

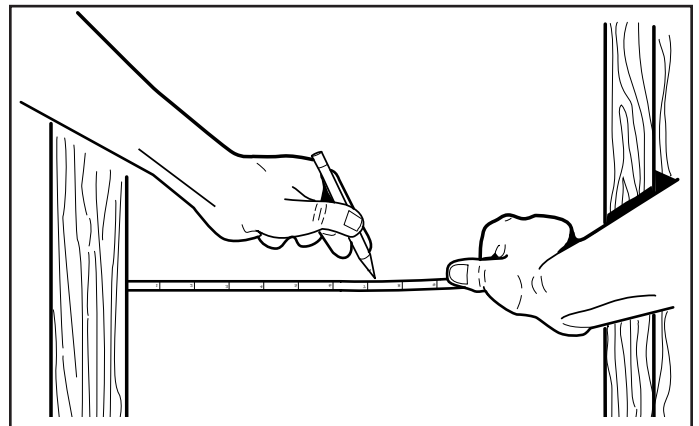
Note: This ventilator is capable of replacing an existing 120 volt powered attic ventilator. Only a qualified person should remove any electrical wiring in accordance with local codes and standards.



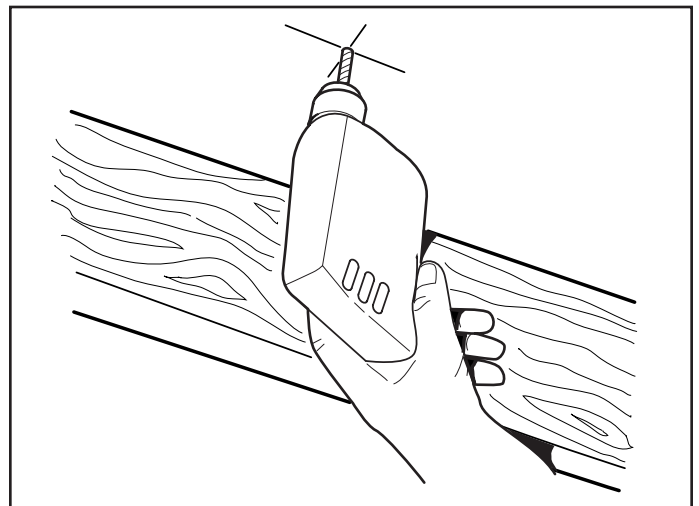
1. Determine the sun's best exposure location on your roof barring shade (trees, other buildings etc.) at 4:00pm in the hottest month of the year. Generally, we recommend a point located 24" – 36" on center below the roof peak and centrally along the ridgeline on the south, southwest, or west side of the home.
2. Prior to installation, we recommend setting up the ventilator to verify operation. Take the ventilator to a location exposed to sun. Removing the cardboard cover from the solar panel should cause the ventilator to operate. Secure cardboard in place over solar panel (for safety).



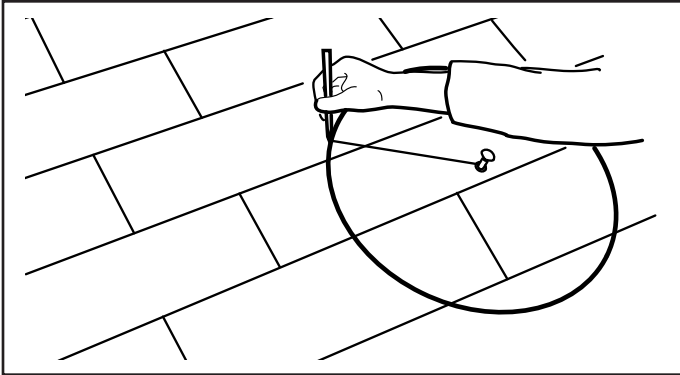
3. Separate the dome from the base by removing four (4) sheet metal screws. Set dome aside.



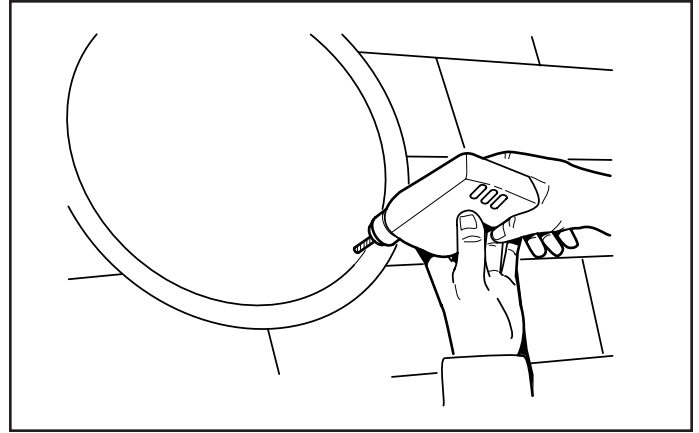
4. Working from the inside of your attic, find the desired ventilator location and mark a spot halfway between rafters at a point that is 24" – 36" below the roof ridge.



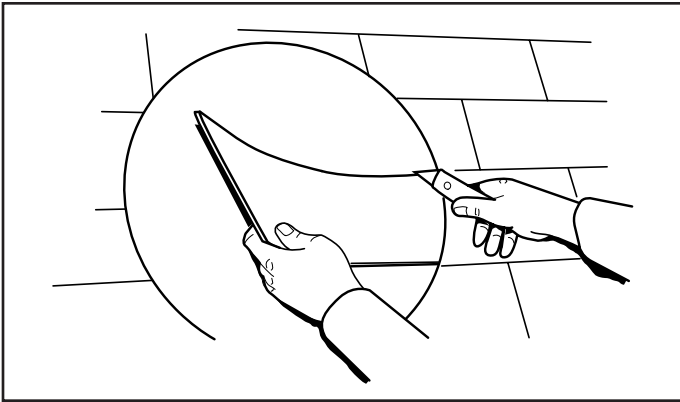
5. Drill a guide hole through the roof at this mark.



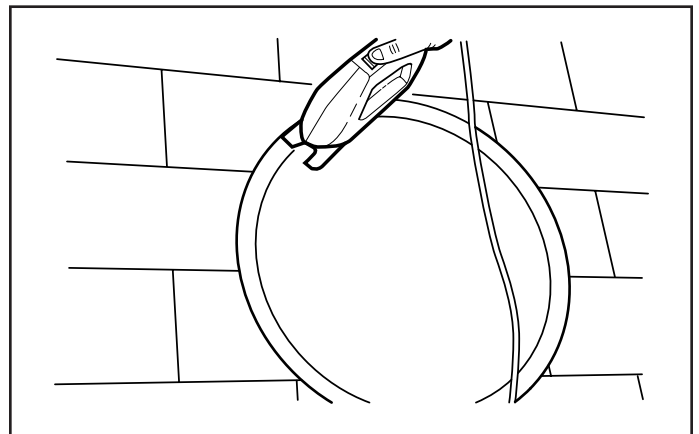
6. From the roof side, using the guide hole as the center point, use a nail and string to scribe a 16-1/2" diameter circle on the shingles. Note: If replacing an existing ventilator, the hole diameter may be larger than 16-1/2". This is acceptable provided the roofing material overlaps the ventilator by at least 2" on all sides.



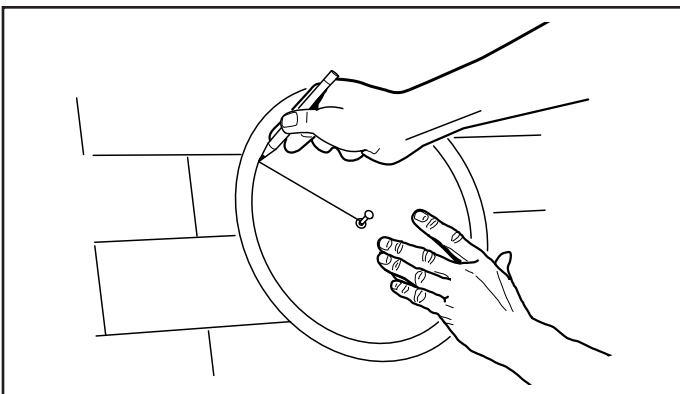
9. Drill a large starting hole for the sabre saw just inside of the line or the 14" circle created in Step 8.



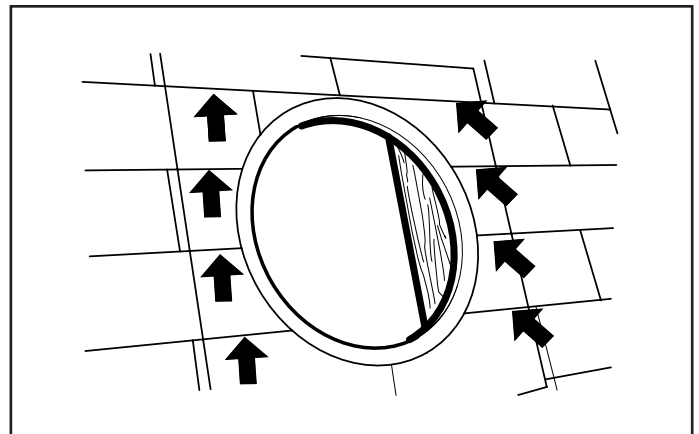
7. Cut out the shingles inside of the circle.



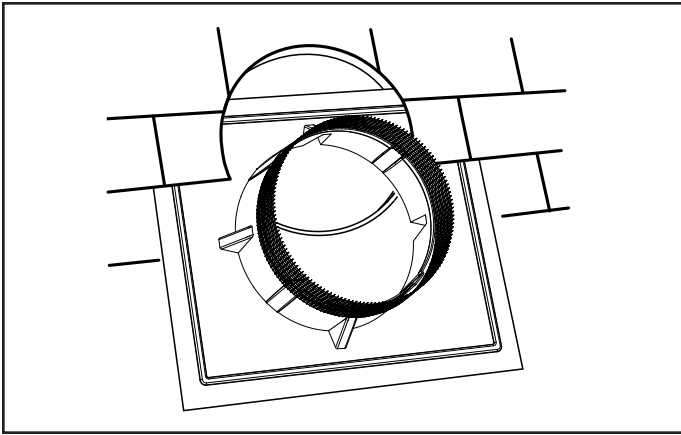
10. Cut out the roof board(s) inside of the line.



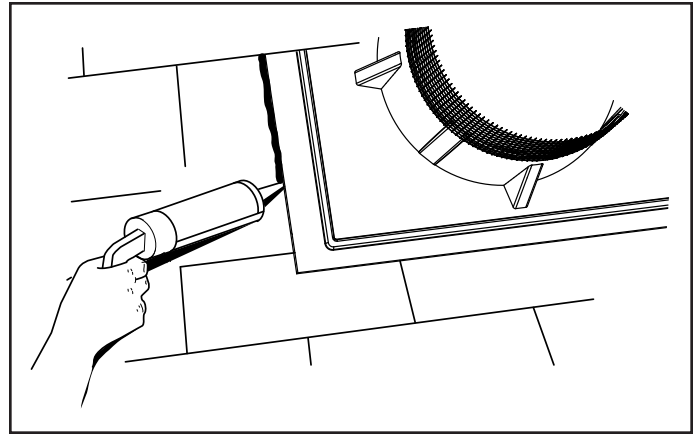
8. Using the same nail and string shown in step 6, scribe a 14" diameter circle on the black paper or roof decking. Note: if replacing an existing ventilator the hole diameter may be larger than 14". This is acceptable provided the ventilator base is adequately supported by the roof decking.



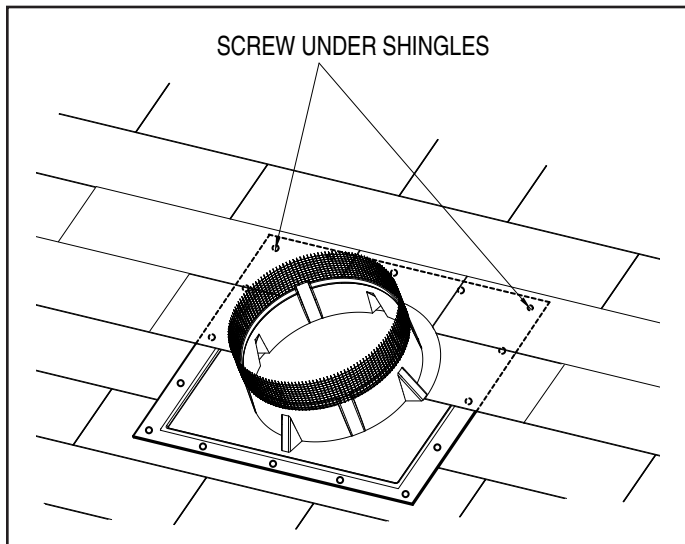
11. For proper removal of roofing nails, draw a 27" square, centered around the hole. Remove nails holding shingles down from top two-thirds of square.



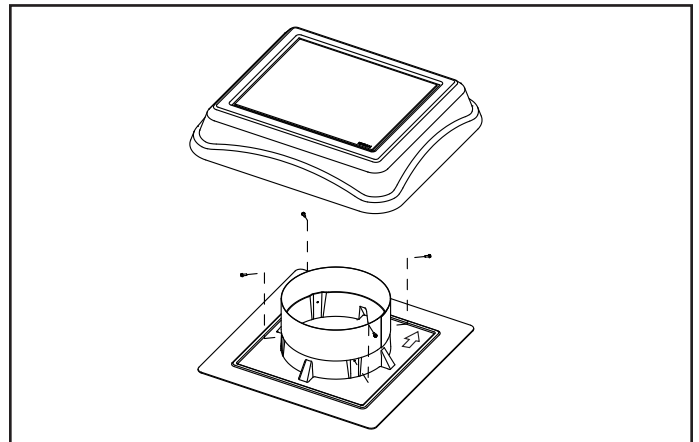
12. Apply a large bead of roofing cement in the molded groove on the bottom side of ventilator base. Make sure the arrow on the ventilator base is pointed toward the roof ridge. Start two-thirds of the way down from the top of the 27" square and slide the ventilator base under the shingles. Do not bend the shingles any more than necessary. Center the ventilator base over the hole.



14. Using a good grade of roofing cement material, seal shingles and all screw heads. **DO NOT** seal the bottom edge of the ventilator base.

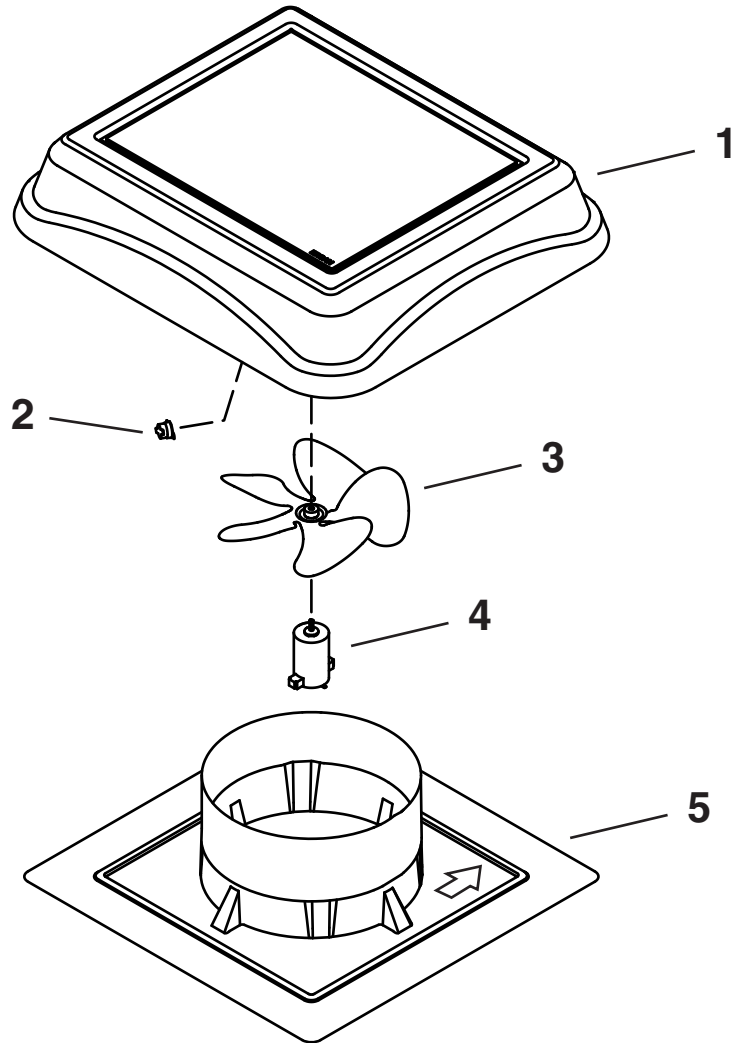


13. Make sure the ventilator base is parallel to the roof ridge, carefully lift shingles and screw base securely to the roof using galvanized #10 x 1" pancake head wood screws. Screw all corners and around perimeter of base every 6 inches.



15. Position the ventilator dome so the top points toward the roof ridge. Install the dome to the ventilator base using the four (4) sheet metal screws removed during step 3. Remove cardboard from the solar panel and make sure the ventilator operates.

SERVICE PARTS



Key No.	Model 345SOBK (Black)	Model 345SOWW (Weathered Wood)	Description
1	77001311	77001313	Solar Panel Assembly (Dome)
2	CWT45	CWT45	Thermostat (Optional)
3	79020041	79020041	Fan Blade w/ Set Screw
4	79080082	79080082	Motor, DC
5	77001284	77001287	Roof Sheet Panel