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Solar Attic Fan Installation Quiz

| 1. Where should the fan be i | nstalled? | | | |
|--|--------------------------------|-------------------------------------|--|--|
| □ A. Anywhere | □ B. Centered on the root | f \Box C. On the South side | | |
| 2. What is the size of the sta | inless steel screws that are | used? | | |
| □ A. #8 x 1.25" | □ B. #6 x 1.5" | □ C. #12 x 2" | | |
| 3. How many feet down from | the roof ridge should the c | enter of the fan be installed? | | |
| □ A. 4 feet | □ B. 1 foot | □ C. 2 feet | | |
| 4. If rafters are located, 24" of installation? | on center how big is the hol | e that must be cut to ensure proper | | |
| □ A. 19" | □ B. 14" | □ C. 21" | | |
| 5. How long should it take to | | | | |
| A. 3 hours | B. 2 hours | □ C. 1 hour | | |
| 6. If possible should you try | to install the unit between ra | afters? | | |
| □ A.Yes | □ B.No. | □C. N/A | | |
| 7. What is the best exposure | for installation of a solar at | ttic fan? | | |
| A. Northern Exposure | B. Southern Exposure | C. Doesn't Matter | | |
| 8. The directions say to hammer a nail somewhere between the rafters. Where? | | | | |
| A. Center | □ B. Left | □ C. Right | | |
| 9. The directions say to attach a string to the nail and to attach a marking pen to the end of it. For a 19"hole, how many inches of string should be used? | | | | |
| □ A. 10" | □ B. 9.5" | □ C. 9" | | |
| 10. The directions say to attach a string to the nail and to attach a marking pen to the end of it. For a 14" hole, how many inches of string should be used? | | | | |
| □ A. 7" | □ B. 9" | □ C.6.5" | | |
| | Ø | | | |

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| | | | |
| 11. For the 19" hole, how big | • | | |
| □ A. 18" | □ B. 20" | □ C. 19" | |
| 12. For the 14" hole, how big | should you scribe a circle | on your shingles? | |
| □ A. 14" | □ B. 14.5" | □ C. 13.5" | |
| 13. If the rafters are 16" on ce \Box A. cut a 14" hole between t | | | Vhat are they |
| □ B. cut a 14" hole between t cut hole | the rafters or cut a 19" ho | le with the roof rafter running | g through the |
| □ C. cut a 19" hole | | | |
| 14. If rafters are 24" on center | , where should the fan in | stalled with regard to the raf | ters? |
| □ A. On them | □ B. Close to them | □ C. Between them | |
| 15. What type of saw is permi installation? | ssible for use in cutting a | hole in the roof for solar atti | ic fan |
| □ A. Chop Saw | □ B. Reciprocating saw | / □ C. Razor knife | |
| 16. For a 19" hole, the direction tarpaper. How big should | | r knife to cut a slit through th | e shingles and |
| A. 6 inches | 🗆 B. 3 inches | C. 4 inches | |
| 17. When cutting the slit throu | igh the shingles and tarpa | aper at which positions? | |
| \Box A. 3 and 9 o'clock | \Box B. 3 and 6 o'clock. | □ C. 3 and 12 o'clock | |
| 18. Why is cutting the slit at th | ne correct positions impor | tant? | |
| \Box A. This allows for the footp | rint of the flashing to be in | nserted over the shingles | |
| \Box B. This allows the footprint | of the flashing to be inse | erted under the shingles | |
| C. Doesn't really matter | | | |
| | | | |

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| 19. When cutting a 14" hole, a flashing to slide over the h | • • | ed to be removed where to allow the | | | | |
| □ A. Low side | □ B. High side towards the Description of the Desc | he ridge 🛛 C. Right side | | | | |
| 20. The directions state to ins roofing nails? | sert the reciprocating blade | sideways at what position to start cutting | | | | |
| \Box A. 6 o'clock position | □ B. 9 o'clock position | \Box C. 3 o'clock position | | | | |
| | e inserted the saw blade ins hich way are you supposed | side the hole at the correct position, when d to cut the nails? | | | | |
| □ A. down | □ B. doesn't matter | □ C. up | | | | |
| 22. As you are cutting the roo hole? | ofing nails at what position | do you stop with the saw blade inside the | | | | |
| □ A. 9 o'clock | □ B. 6 o'clock | □ C.12 o'clock | | | | |
| 23. What is the overall reasor □ A. This allows the flashing | footprint to slide up underr | C C | | | | |
| | □ B. This allows for the flashing footprint from sliding up underneath the shingles | | | | | |
| \Box C. We don't need to remove | \Box C. We don't need to remove the nails | | | | | |
| 24. You now need to use the caulking where in regards | | the box. The directions say to apply the | | | | |
| \Box A. The underside \Box B. | over the top of the flashing | C. Everywhere | | | | |
| 25. How many rings of caulki | ng are sufficient when appl | ying caulking? | | | | |
| □ A. 3 | □ B. 1 | □ C. 2 | | | | |
| 26. In what direction should y | ou apply the caulking? | | | | | |
| \Box A. in a random manner | B. Doesn't matter | □ C. In a concentric manner | | | | |
| 27. How do you adjust the so | lar panel on the top of the s | solar attic fan? | | | | |
| \Box A. remove the screw on ea | | | | | | |
| □ B. it is not adjustable | | | | | | |
| C. leave it flat | | | | | | |
| | | | | | | |

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| 28. Is it really important to adjust the solar panel? | 28. | ls i | it really | important | to ad | just the | solar | panel? |
|---|-----|------|-----------|-----------|-------|----------|-------|--------|
|---|-----|------|-----------|-----------|-------|----------|-------|--------|

□ A. Yes □ B. No □ C. Doesn't matter

29. Why is it important to adjust the solar panel on top of the solar attic fan?

- □ A. so that it is secure
- □ B. So that it won't fall off
- C. so that it will collect the most sunlight during the day
- 30. How do you secure the screws that are on each side of the panel?
- \Box A. glue them in
- \Box B. simply reinsert them and tighten them to the desired position
- \Box C. No need to secure them
- 31. When putting the solar fan on the roof, where do you slide the flashing in relation to the tarpaper and shingles?
- \Box A. over the tarpaper and shingles
- B. Doesn't matter
- C. under the tarpaper and shingles
- 32. How does the flashing come into contact with the raised portion of the flashing?
- \Box A. they simply come in to contact
- B. you apply force so that the flashing comes into contact with the flashing
- C. Doesn't come in contact
- 33. At this point in the install, where will the bottom part of the flashing be in relation to the shingles?
- \Box A. you won't see the bottom part of the flashing
- □ B. It will be on top of the shingles
- □ C. It doesn't matter



- 34. Now the directions state that you must use 4 of the Phillips head screws that are provided in the box to secure the fan to the roof. Where in relation to the clock are they to be installed?
- \Box A. 2 o'clock, 4 o'clock, 7 o'clock and 12 o'clock
- B. 3 o'clock, 6 o'clock, 9 o'clock and 12 o'clock
- □ C. 1 o'clock, 2 o'clock, 3 o'clock and 4 o'clock
- 35. When securing the screws to install the product what is the actual way that they should be installed?

□ A. The 3 and 9 o'clock position screws should be on top of the shingles and the 6 and 12 o'clock position screws should go under the shingles

B. It really doesn't matter so long as the screws are used to secure the product to the roof

□ C. The 3 and 9 o'clock position screws should go underneath the shingles and the 6 and 12 o'clock position screws should go on top of the shingles

- 36. At what positions in relation to the clock should you caulk over the screw heads since they will be exposed to the weather?
- □ A. 3 and 9 o'clock □ B. 3 and 12 o'clock □ C. 6 and 12 o'clock
- 37. You should then have some caulk remaining in the tube. What is the recommended application for the remnants to ensure a watertight install?

□ A. seal the area where the 4" slits were made and around the area where the shingles meet the raised area of the flashing

□ B. It should be sealed by now

□ C. Anywhere

38. What is the gauge of the housing and flashing of the attic fan?

| □ A050 □ B070 | 🗆 C080 |
|---------------|--------|
|---------------|--------|

39. What type of flashing is used for tile installations of solar attic fans?

| 🗆 A. Paper Membrane 🗆 B. Aluminum Membrane | □C. Flashing Skirt with Rubber |
|--|--------------------------------|
| | membrane |

40. In tile installation, how many tiles do you remove for attic fan installation?

□ A. 20 □ B. Enough Tiles to accommodate flashing skirt □ C. None



- 41. When you are handling the solar attic fan, how do you prevent the PV panel from getting damaged?
- \Box A. Turn it upside down and place it on a soft cloth or towel
- □ B. It won't get damaged
- \square C. There is no way to prevent the PV panel from getting damaged
- 42. One of the many concerns that exist when installing a solar attic fan to a tile roof is that there piece of wiring that is hanging free. How do you make sure that it is not dangling about?
- □ A. Tape it to the inside of the flashing
- □ B. It should hang free as it is

□ C. Locate the plastic wire clip on the inside of the flashing. Remove the screw on the clip to remove it from the flashing, as the wire will stay connected to the clip

- 43. When installing a solar attic fan to a tile roof it is mandatory to remove the housing from the flashing. There are screws that secure the housing to the flashing? How many of the screws are there?
- □ A. 4 □ B. 5 □ C. 3
- 44. These screws are not visible when looking at the unit. How do you find where they are so that you can take the unit apart?
- \Box A. It is not necessary
- B. Unit can't be taken apart as it is one piece

| \Box C. Remove the two screws on the aluminum brackets on top of the housing holding the solar |
|--|
| panel. Pull up the solar panel to allow access to the screws that secure the housing to the flashing |
| L brackets |

- 45. When the housing and flashing are reattached, how do you ensure that the two parts of the system line up?
- A. It is not important, as the system is the same all around

| \square B. With a marking pen make two marks on the unit as one is on the housing and and | other on the |
|---|--------------|
| flashing that lines it up with the housing | |

C. Just get lucky



46. Is the fan attached to the housing or the flashing?

A. Flashing

B. Housing

C. It is not attached to anything

- 47. The directions state that the fan will continue to run once the housing is removed from the flashing. How do you keep the fan from running?
- □ A. It can't be stopped
- □ B. It will stop on its on
- C. Cover the PV panel with a soft cloth or piece of cardboard
- 48. Regardless of whether or not you cut a 14 or 19" hole the attic fan must be installed to the roof. In tile roof applications, how does the flashing attach to the roof?
- A. Cut the rafters
- B. Use as much caulk as necessary

C. Center the flashing over the hole and mark the flashing footprint onto the furring strips.

Remove the portion of the furring strips where the flashing will be installed.

- 49. Where does the flashing sit with respect to the roof sheathing?
- \Box A. It sits directly on the roof sheathing
- B. It replaces the roof sheathing
- C. It is simply placed under the roof sheathing
- 50. The flashing skirt that is used in tile roof installs has to be attached to the flashing on the attic fan. How is it attached?
- \Box A. It falls into place \Box B. Press down the rubber ring around the flashing \Box C. N/A
- 51. When reattaching the housing to the flashing in tile installs there is a procedure that must be adhered to do this properly. How do the two parts reattach?
- $\hfill\square$ A. The housing slides onto the flashing
- B. There is nothing to be reattached
- C. replace the screws that were removed



52. In tile installations, when installing the unit to the roof, is it necessary to pre drill the holes to attach the unit to the roof?

□ A. No □ B. Yes □ C. Doesn't matter

- 53. There are (6) screws that are provided in the box for installation. The problem, however, is that the flashing skirt used in tile installs is in the way. How do you secure the screws to the roof without the flashing getting in the way?
- □ A. You drill through the skirt
- □ B. It doesn't get in the way
- C. Simply bend it or roll the flashing skirt up until all 6 screws are secure
- 54. When tiles are reinstalled to the roof after the unit is secure to the roof. Which tiles are reinserted first?
- \Box A. The one on the bottom
- B. The ones at the high side of the roof towards the ridge
- C. Doesn't matter as they all have to be reinstalled
- 55. There may also be an issue with the tiles that are reinstalled in a tile installation as they may no longer be secure to the roof. What additional step may be necessary to support the tiles?
- □ A. They will be secure
- B. There is no way to determine how secure the tiles are

□ C. You may need to replace some furring strips may need to be replaced on top of the flashing footprint to support the tiles

- 56. When installing a solar attic fan into tile roofs, do you have to cut the tiles to fit around the flashing?
- □ A. Yes □ B. No □ C. N/A
- 57. When replacing the tiles on the low side of the roof in a tile roof install for solar attic fans, is the flashing skirt above or below the tiles?
- □ A. Above □ B. Below □ C. It doesn't matter



- 58. How do you make the skirt fit around the tiles in a tile roof install of a solar attic fan?
- \Box A. It simply fits around the tiles
- B. It won't line up
- C. You need to reshape the skirt to form around the tiles
- 59. For curb mount installations of solar attic fans a curb must be used. It is something that you must assemble prior to installation. What material do you use to make this?
- □ A. Aluminum □ B. Copper □ C. Pressure Treated Lumber
- 60. When building the curb for curb mount solar attic fan installs what size material is acceptable to be used?
- □ A. 2"x6" or 2"x4" □ B. 2"x6" or 2"x8" □ C. 2"x6" only
- 61. The curb on curb mount installations of solar attic fans must be secure on all four corners of the material that is used. What type of fasteners are acceptable?
- □ A. Tap Cons □ B. Wood Screws or galvanized nails □ C. dowel rods
- 62. For curb mount solar attic fan installs, where do you install the solar attic fan?
- □ A. Doesn't matter □ B. at an area that is between the trusses □ C. Northern exposure
- 63. Is it necessary to center the curb over the space between the trusses in curb mount solar attic fan installations?

 \Box C. N/A

- □ A. Yes □ B. No
- 64. Is it ok to install a curb mount solar attic fan when the weather is inclement?
- □ A. Yes □ B. Doesn't matter □ C. No
- 65. You may also need some additional roofing material when installing a curb mount solar attic fan. What type of material is acceptable?
- \Box A. Doesn't matter \Box B. needs to match the existing roofing \Box C. Brick



- 66. In curb mount solar attic fan installation, how does the curb attach to the hole that you cut in the roof?
- □ A. It doesn't fit there
- B. Place the curb over the opening and toenail into existing roofing using galvanized nails
- C. You do not need to cut a hole

67. What could potentially be required to do to make sure that the curb is properly secure?

□ A. Caulk Flashing provided with product

B. It will be secure so don't do anything additional

□ C. You may need to use the same building material that is what the roof is to make the curb secure

68. In curb mount solar attic fan installation how do you prevent the curb from leaking?

- \Box A. It is sealed
- B. there is no way to prevent the curb from leaking
- C. wrap the curb with roofing material to prevent leaking

69. How do you attach the solar attic fan to the curb in curb mount installations?

- □ A. Caulk it
- B. It sits over the curb

C. use the screws that are provided as you pre drill the holes on the solar attic fan curb lip

70. There is an optional thermal switch option that is available for the solar attic fan. What is it designed to do?

 \Box A. It is designed to turn on when the temperature reaches 80 degrees and shut off when the temperature drops to 60 degrees

□ B. It is designed to turn on when the temperature reaches 80 degrees and shut off when the temperature drops to 70 degrees

□ C. It is designed to turn on when the temperature reaches 120 degrees and shut off when the temperature drops to 32 degrees

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| 71. When the solar attio □ A. in an up position | | - | the thermal snap swite □ C. In a down positie | | |
| 72. There are 2 differer they? | nt wires on both th | e solar attic fan a | and the thermal switch | . What color are | |
| □ A. Black and green | □ B. Black and w | vhite | □ C. Black and red | | |
| 73. How do the two the □ A. You install dissim | | | attic fan wires? | | |
| □ B. You attach the sa | ame color wires to | each other | | | |
| □ C. You need an elec | ctrician | | | | |
| 74. When installing a so raining? | olar attic fan in a g | able mount insta | llation, is it ok to instal | ll it when it is | |
| □ A. Yes | 🗆 B. Doesn't ma | tter | □ C. No | | |
| 75. When installing a solar attic fan gable style where must the fan be installed? \Box A. Outside the gable | | | | | |
| B. It is caulked to the | \Box B. It is caulked to the framing members | | | | |
| □ C. It is installed betv | \Box C. It is installed between the studs in the gable area | | | | |
| 76. What do you do if the gable opening is larger than the fan unit shroud? □ A. Don't worry about as it is no problem | | | | | |
| \Box B. It has nothing to c | do with the install | | | | |
| □ C. the excess openi | ng must be blocke | d | | | |
| 77. When the gable far | is installed inside | the attic which w | vay should the motor b | be facing? | |
| □ A. Towards the attic | B. Towards ou | itside | C. Does not matter | | |
| 78. The solar attic fan i How many are prov | - | vides wood scre | ws to attach the shrou | d to the studs. | |
| □ A. 14 | □ B. 10 | | □ C. 16 | | |

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| | 79. Is it necessary to at □ A. No | ttach all of the woo □ B. Yes | | ed to attach the shrou □ C. N/A | d? |
| [| 80. What is the biggest □ A. It can go anywhe □ B. Position it where □ C. No concern | re on the roof even | where the sun of | • | f? |
| 8 | 81.Can you install a so | plar attic fan gable s | style onto a tile r | oof? | |
| | □ A. Yes | □ B. No | - | □ C. N/A | |
| ٤ | 82. The product provide are there? | es you with L style | brackets to insta | all the PV panel to the | roof. How many |
| [| □ A.4 | □ B. 3 | | □ C. 2 | |
| 8 | 83. To attach the solar attach them togethe | • | | certain type of screw | s that are used to |
| [| □ A. Lag screws | 🗆 B. Tap Cons | | C. self-tapping scr | ews |
| [| 84.When attach the L I □ A. You pre drill hole: □ B. You attach the so □ C. You glue it | s and then screw th | ne screw through | n the bracket to the pa | anel |
| | 85.Do you attach the L □ A. Short Side | Brackets to the lo □ B. Long side | 0 | of the panel? □ C. N/A | |
| | 86. If installing the L Br □ A. Tap Cons | ackets to a shingle □ B. Plastic Sleev | - | type of screws? □ C. Machine Wood | Screws |
| 8 | 87.How many of the so shingle roof is there | | | brackets to the roof w | hen installing into |
| [| □ A. 2 | □ B. 6 | | □ C. 4 | |
| | | | | | |



- 88. When installing the L Brackets into tile roofs in gable installations of solar attic fans, how do you attach the provided anchors to the tile roof?
- □ A. You drill them in
- B. You pre drill holes in tile to accommodate the anchors provided
- C. You cannot install into tile with solar attic fans
- 89. How many anchors are provided in the box for tile roof installs when installing a gable attic fan into tile?
- □ A. 6 □ B. 0 □ C. 4
- 90. For shingle roof installs of gable attic fans, how do you ensure that there will be no leaking around where the wood screws are screwed into the roof?
- $\hfill\square$ A. There is no way to prevent leaking, as it will occur
- B. Caulk around the wood screws to prevent leaks
- C. We cannot avoid leaking
- 91. How do you secure the L bracket anchors to the roof that are provided in the box for tile installs?
- \Box A. you caulk them in \Box B. They can't be installed \Box C. Tap them in
- 92. Which one of the ways is <u>not</u> an acceptable way to route the power cable from the fan to the solar panel?

□ A. Route the power cable from the fan unit through the gable vent and along the outside of the house up to the roof

- B. Cut off the cable from the fan and splice it to the wire that attaches to the solar panel
- □ C. Drill a small hole next to the solar panel on the roof. Route the power cable from the fan unit through the attic and up through the hole. Caulk around the hole to prevent leaking
- 93. In Solar attic fan gable applications, when attaching the cable from the fan to the solar panel there happen to be loose wires, how do you secure the loose wires?
- □ A. Caulk it □ B. It is ok for it to hang there □ C. Use wire staples that are not provided in the box



- 94. What happens if when you are attaching the solar panel wires to the fan wires in solar gable fan installations if the power cables do not reach?
- □ A. They will always reach □ B. use the provided adaptor cable □ C. N/A