

Inspecting the Exterior – Section 2



**HOME INSPECTION
EDUCATIONAL
SEMINARS LLC**

How the Online Course Works

This is a four hour continuing education course for credit with the NC Home Inspector Licensure Board. We are required to provide 50 minutes of education per hour for a total of 200 minutes. The course is broken into four sections. Each section will have a countdown timer. You will be required to spend the necessary time in each section. If you have 10 minutes of inactivity, you will be logged out and will have to start the section over. Please devote enough time to each section to complete that section.



**HOME INSPECTION
EDUCATIONAL
SEMINARS LLC**

Fiber Cement Cladding Systems



HOME INSPECTION
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LAP SIDING - INSTALLATION INSTRUCTIONS

NOV 1998

CEDARMILL™ • SMOOTH • COLONIAL SMOOTH™ • COLONIAL ROUGHSAWN™ • BEADED CEDARMILL • BEADED SMOOTH
IMPORTANT: FAILURE TO INSTALL AND FINISH HARDIPLANK® PER JAMES HARDIE'S WRITTEN INSTRUCTIONS WILL VOID THE PRODUCT WARRANTY. LOCAL BUILDING CODE REQUIREMENTS ALSO APPLY.

HANDLING & STORAGE:

Store flat and keep dry prior to installation. Installing Hardiplank wet or saturated may result in shrinkage at butt joints. Carry panels on edge.



CUTTING OPTIONS:



Circular saw with carbide tipped blade



"SNAPPER STEEL HEAD™"
Electric Head Shear
Call 800-297-7487 for shear tool information.



"SNAPPER SHEAR™"
Pneumatic Shear



Score and snap knife

FRAMING REQUIREMENTS:

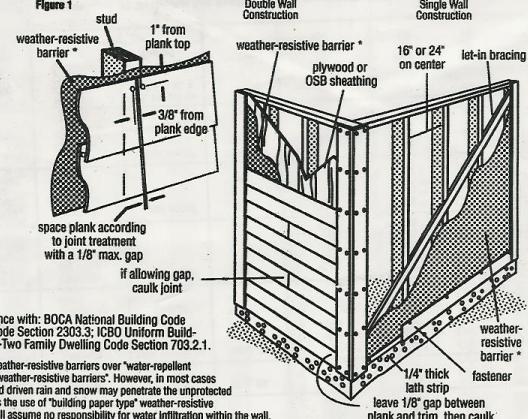
Hardiplank lap siding can be installed over braced wood or steel studs spaced a maximum of 24" o.c. Hardiplank lap siding can also be installed over foam insulation up to 1" thick. Irregularities in framing, sheathing, and/or foam insulation can mirror through the finished application. A weather-resistant barrier is required *.

Applying Hardiplank Siding:

- Top Edge
Place fasteners 1" from top plank edge.
- Side Edge
Place fasteners no closer than 3/8" and no further than 1/2" from the plank side edge.
- Bottom Edge
Place fasteners no closer than 3/4" and no further than 1" from the plank bottom edge.

* Use a weather-resistant barrier in accordance with: BOCA National Building Code Section 1403.3; SBCCI Standard Building Code Section 2303.3; IBCO Uniform Building Code Section 1402.1; or CABO One-and-Two Family Dwelling Code Section 703.2.1.

Note: Many Building Codes exempt the use of weather-resistant barriers over "water-repellent panel sheathing" or exterior panels classified as "weather-resistant barriers". However, in most cases where a weather-resistant barrier is not used, wind driven rain and snow may penetrate the unpainted wall cavity. Therefore, James Hardie recommends the use of "building paper type" weather-resistant barriers with all siding products. James Hardie will assume no responsibility for water infiltration within the wall.



GRADE CLEARANCE Figure 2

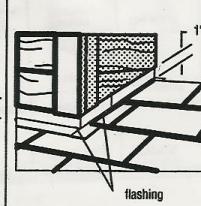
Building Codes require a minimum of 6' clearance between bottom edge of plank/framing and earth or finished landscaping.



Hardie Siding applied above porches, patios, driveways, etc. must have a 2' clearance which will allow the siding to remain above the surface where water might collect.

ROOF CLEARANCE Figure 3

Leave 1' - 2' clearance between roofing and bottom edge of siding.



CONCRETE CONSTRUCTION Figure 4

When Hardiplank siding is installed over concrete construction, the wall must first be furred out with nominal 2" x 2" wood framing or minimum 1/2" x 2" (min. 20 gauge steel studs) metal hat sections anchored to the wall. Framing can be spaced up to 24" o.c. A weather-resistant barrier * is recommended between the framing and the siding.



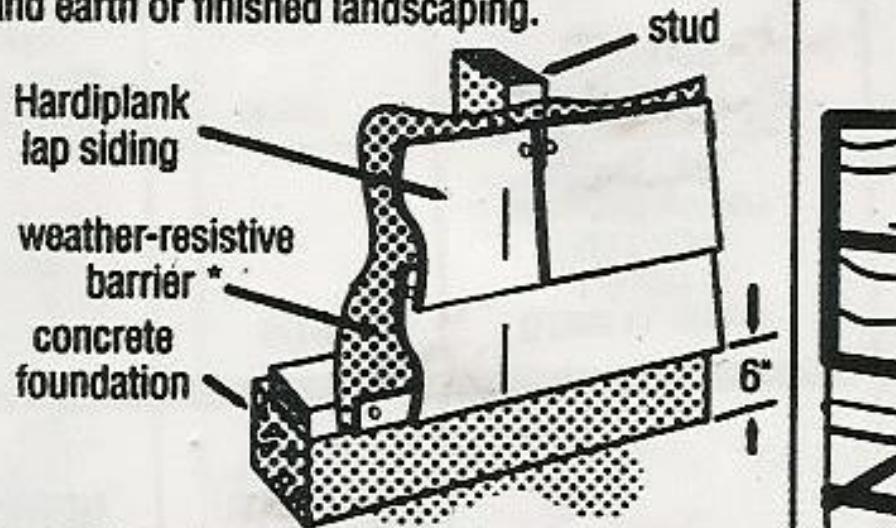
Typical Manufacturer's Installation Detail Instructions

Note siding manufacturer installation specifications says: **siding above porches, patios, driveways, etc.** **MUST** have a **2"** clearance to remain above the surface where water might collect.

GRADE CLEARANCE

Figure 2

Building Codes require a minimum of 6" clearance between bottom edge of plank/framing and earth or finished landscaping.

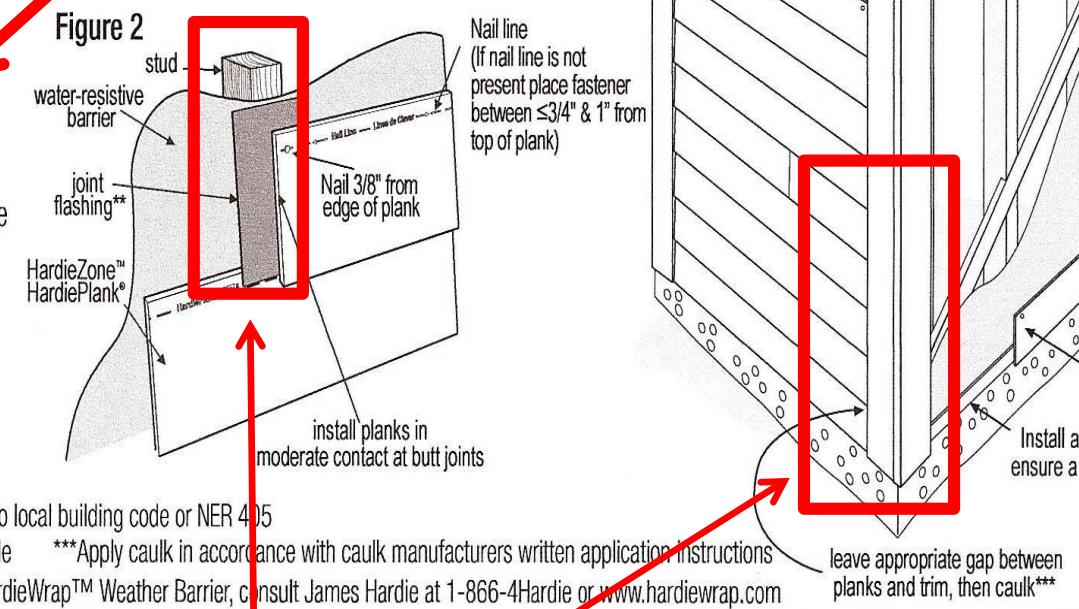


Hardie Siding applied above porches, patios, driveways, etc. must have **2"** clearance which will allow the siding to remain above the surface where water might collect.

Siding Products at www.jameshardie.com.

INSTALLATION: JOINT TREATMENT†

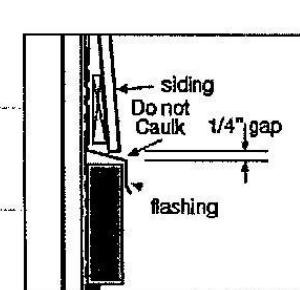
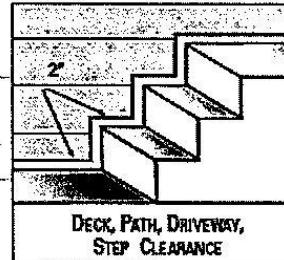
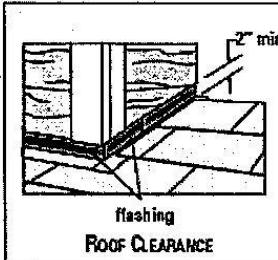
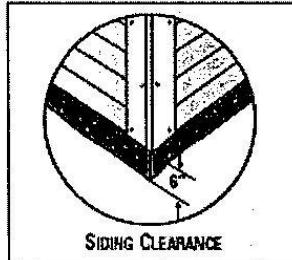
(Required for ColorPlus® Finish, Recommended for Primed product) James Hardie does not recommend the use of caulk at field butt joints. Install factory finished edges together at butt joints.



**Flashing tape to be used between siding butt joints and no sealant is needed.
Siding to vertical trim joints are to have a gap and sealant applied along the joint.**

Clearance Requirements

- Maintain a 2" clearance between Hardie products and:
Roof shingles – Driveways – Decks – Paths
- A 6" clearance is required between Hardie products and finished grade
- Maintain a $\frac{1}{4}$ " gap between flashing and plank
- Adjacent finished grade must slope away from the building
6" in the first 10' is typical-per code
- Hardie products must not be installed in such manner that they remain in contact with standing water





- ▶ Fiber cement siding does delaminate when manufacturing installation guidelines are not met.
- ▶ Proper clearance from shingle tabs were not met.

Fiber Cement Defect Recognition



Fiber cement siding
installed in contact with
masonry steps and stoop .

Manufacturer's require 2"
separation.

Failure resulted in
delaminated siding where
in contact with masonry
products.

Where Will Moisture Weep Out?



No sealant is to be under the bottom edge of the fiber cement siding and between the metal "Z" flashing above the white horizontal trim board.

Proper Flashing and Drainage

- ▶ Note Flashing is not sealed along the metal “Z” flashing to lower course of fiber cement.
- ▶ Should be left unsealed to allow moisture to weep out to face of “Z” flashing.
- ▶ This is a proper installation at horizontal transition.



Case Study - South Raleigh – Trebor Drive



- ▶ 1350 Sq Ft Home built in 1997
- ▶ 13 years old at the time of repair

South Raleigh



- ▶ Chimney penetration through roof without proper step flashing or kick out flashing.

South Raleigh



- ▶ Damage to fiber cement siding
- ▶ Delaminating layers

9 8:34AM

South Raleigh



- ▶ Fiber Cement Siding will delaminate if not installed properly and sealed.



Hardboard Siding Cladding System



**HOME INSPECTION
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Improper Nailing of Hardboard Siding

MASONITE®

Nailing

Fig. A

Damage from improper nailing can allow moisture to enter the exterior walls of the home. Homeowners can repair nail damage using simple household tools.

To perform satisfactorily, siding must be fastened to the home in the correct manner.

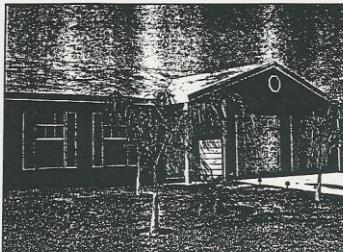
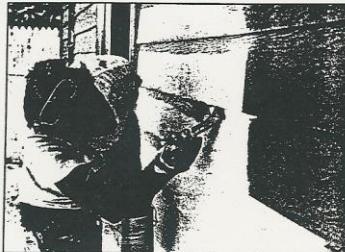
Inspections of siding installations, where improper nailing was done by builders, have shown problems with moisture penetration of the exterior walls of the homes.

Improper nailing practices include:

- Using the wrong size nail
- Countersinking or driving the nail through the top layer of the siding and not repairing the damage (see figure A).
- Missing the stud, leaving a row of holes without filling and repainting the holes.
- Not sinking the nail completely into the stud.



Painting



Paint protects the home's exterior from wear and damage from the elements. It is important that the condition of the paint be checked periodically and maintained.

Exterior wood and wood-based siding should be painted to maintain appearance and extend service life.

The surface of the siding will accept most types of paints intended for exterior use on wood and hardboard products. However, it is most economical in the long run to use a high quality paint, properly applied.

Follow application recommendations from the paint manufacturer to obtain satisfactory performance and extend the period of time between repaintings.

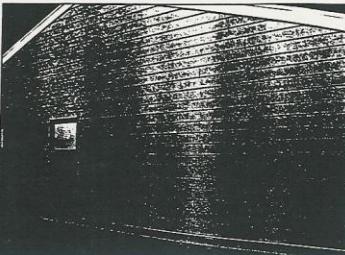
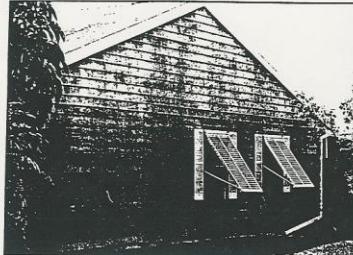
Best results are obtained when using BRUSH application methods.

Roller or pad application is less desirable, but may be used ONLY IF allowed by the paint manufacturer and ONLY IF the proper amount of paint is applied.

X13

Improper painting of Hardboard Siding

Manufacturers recommend two coats of brush painting for best results



Key Issue

A high quality, low or no-chalking acrylic latex paint, properly applied will provide the home with the best protection.

Adequate coverage must be maintained on all grooves and drip edges to ensure proper siding performance.

Surface Preparation

When painting the siding, its surface must be clean, free of dust, dirt, mildew and other foreign material. If cleaning is necessary, wash the siding with a mild detergent prior to painting.

Finish Selection

Select a brand name, top quality paint intended for the wood or wood-based siding in use.

Primer: Use an oil or water base primer which will seal the surface and is compatible with the topcoat to be used.

Topcoat: Use a low or non-chalking exterior acrylic latex paint, low chalking acrylic or acrylic heavy-bodied latex stain or a gloss or semi-gloss oil base paint. Only sidings with wood-like surface textures are suitable for staining.

Due to the variables involved in field application of finishes, siding manufacturers cannot be responsible for the performance of field-applied finishes.

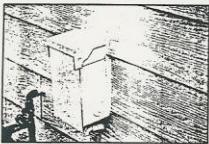
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X/14

Manufacturers require adequate coverage be maintained on all grooves and drip edges



Caulking

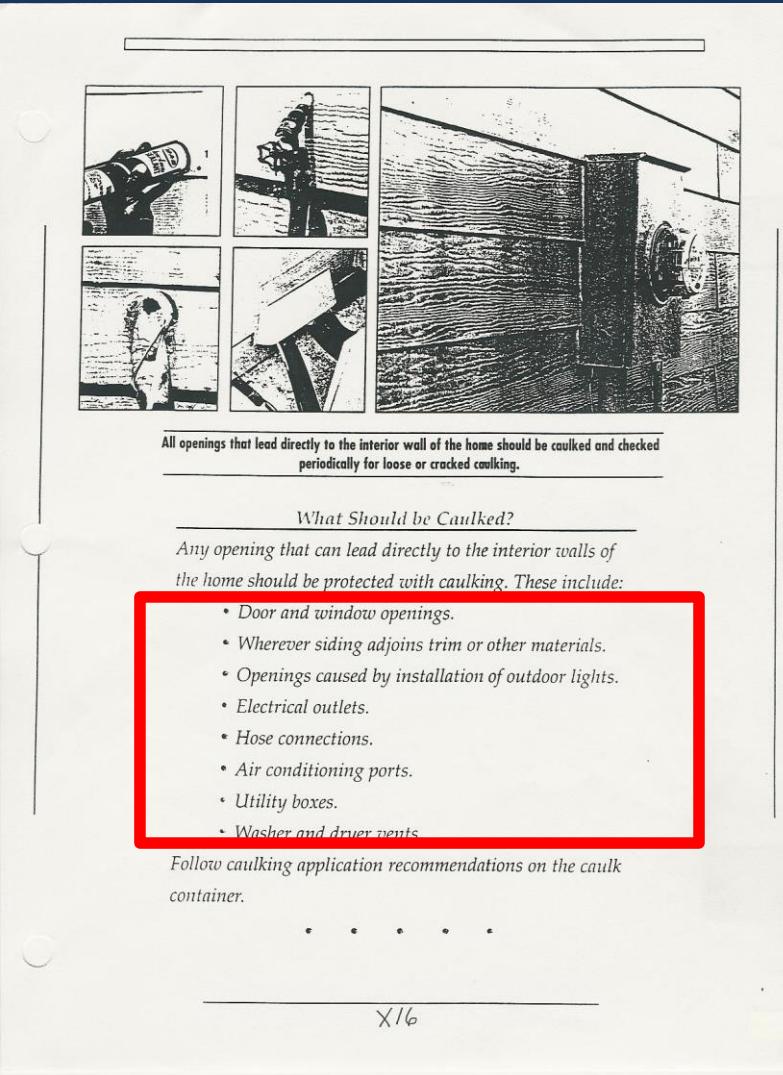


Loose or cracked caulking can allow moisture to severely affect the exterior of a home. A high quality, long-life caulk is another protective barrier against water damage.

Loose or cracked caulking can allow moisture to severely affect the integrity of your home. Replacing loose and cracked caulking, with a non-hardening, high quality, long-life caulk, such as acrylic latex will protect your home from moisture. Short-life caulk, such as oil-based "economy" caulk should be avoided.

X15

**Loose or
crack
sealants can
allow for
Water
/moisture to
decay the
siding.**



Requirements for what areas should be sealed/caulked.

ABTC Homeowner Maintenance Tips
by Scott Austin

Siding Staining

The appearance of brown, molasses colored stains on the finished or exposed surfaces of wood based lap siding is not recognized as a quality problem by any manufacturer of hardboard or natural wood siding. This usually occurs in the colder months and may be attributed to one (or all) of the following:

1. Damaged or inadequate warm-side vapor barrier.
2. Excessive ground water or inadequate crawl space vapor barrier.
3. Inadequate crawl space ventilation.
4. Excessive moisture from unvented baths, dryers, or kitchens.
5. Excessive moisture trapped inside the home during construction.

Following are point-by-point suggestions for corrective action:

1. It is obvious that moisture is being pushed through the wall and is condensing on the back side of the cold siding. This may be the result of a tear in the or lack of vapor barrier or inadequate coverage in an area of the house where extensive moisture is created, (i.e., bathroom). Adding a vapor barrier after construction is completed is impractical, but a vapor resistant paint (such as Glidden's Insul-Aid) used on the interior walls will help.
2. A poly ground cover (4-6 mil) should be installed over the entire crawl space area. This will help prohibit moisture from rising up through walls.
3. Crawl space venting should be one square foot of free vent for each 150 square feet of crawl space area, and should be left open except during hard freezes.
4. Install and duct bath vents to the outside, not into the attic. Allow fans in bathroom and kitchens to run 10-15 minutes following use.

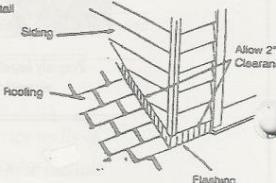
This problem is one that is fairly common to new construction. An enormous amount of moisture is generated during construction of a home through painting, drywall taping etc. Unfortunately, during the cooler season, this excess moisture forces itself through the wall cavity and condenses on the coldest section of wall - the back of the siding. This moisture comes from any number of products within the wall. Generally, such staining will occur only in the first year of a home.

FINISHING

- a) FACTORY PRIMED SIDINGS SHOULD BE FINISHED COATED AS SOON AS POSSIBLE. CAUTION: SIDING MUST BE REPRIMED PRIOR TO PAINTING IF LEFT UNPAINTED FOR LONGER THAN 180 DAYS.
- b) Any small areas of prime coat damage should be touched up with primer before painting. Small punctures can be filled with exterior grade wood putty, sanded and re-primered before painting.
- c) High quality exterior acrylic latex paints specially formulated for use on wood and engineered wood substrates are highly recommended.
- d) Coatings not recommended are:
Felt oil or alkyd (shake or shingle) paints, vinyl base resin combinations (vinyl acetate - PVA, vinyl acrylic, vinyl acetate acrylic copolymer paints and acrylic latex stains).
- e) Thoroughly paint all exposed joints, especially the bottom edge of the siding and all cut ends, notches and ledges. (Figure 7)

NOTE: Apply 2.5 dry mils of finish paint to primed siding face, grooves and bottom edge. This will normally require two brush applied coats of unthinned latex paint or three spray applied coats. Special care should be taken to coat all exposed edges and contours of textured or grooved surfaces.

Figure 7
Dormer Detail



Apply 2.5 mills of finish paint which normally requires two brushed coats of paint with care taken to seal all exposed edges.

ABTCO Homeowner Maintenance Tips
by Scott Austin

Siding Staining

The appearance of brown, molasses colored stains on the finished or exposed surfaces of wood based lap siding is not recognized as a quality problem by any manufacturer of hardboard or natural wood siding. The direct cause is moisture condensation within the walls. This usually occurs in the colder months and may be attributed to one (or all) of the following:

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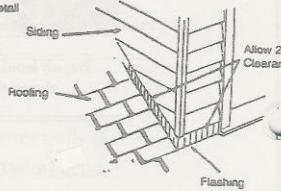
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- c) High quality exterior acrylic latex paints specially formulated for use on wood and engineered wood substrates are highly recommended.
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Flat oil or alkyd (shale or shingle) paints, vinyl base resin combinations (vinyl acetate - PVA, vinyl acrylic, vinyl acetate acrylic copolymer paints and acrylic latex stains).
- e) Thoroughly paint all exposed joints, especially the bottom edge of the siding and all cut ends parallel to nail line. (Figure 7)

NOTE: Apply 2.5 dry mils of finish paint to primed siding face, grooves and bottom edge. This will normally require two brush applied coats of unthinned latex paint over previously applied coats. Special care should be taken to coat all exposed edges and contours of textured or grooved surfaces.

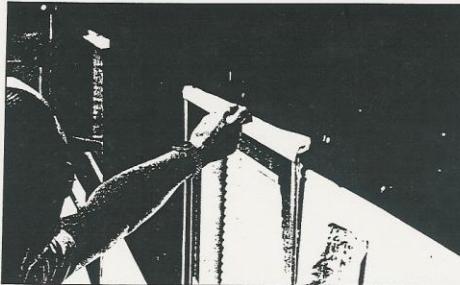
Figure 7
Dormer Detail



**Emphasis is placed
on the importance
of proper flashing
to prevent water
infiltration behind
the siding.**



Protective Flashing



Properly installed and maintained metal flashing adds another protective element that prevents moisture from penetrating the exterior wall of the home.

Protective flashing is usually a sheet metal strip installed as a waterproofing device above windows and doors. Flashing is a critical element in keeping moisture from the exterior walls of your home. Where flashing is not installed or is damaged, water can leak behind or be absorbed up into the siding material and lead to moisture damage.

Typical Hardboard Findings



Deteriorated hardboard siding where siding is in contact with shingle tabs - from water wicking up bottom edges of siding.

Typical Hardboard Findings



Deteriorated hardboard siding where siding was sealed to the “Z” flashing above the garage – can trap water behind the siding to allow the decay.





Notice how smooth the patch repairs were made to the decay around the window, but the decay still exists which transfers the actual repair to your buyer if you miss this. There is no substitute for a close and thorough inspection.



**Hardboard siding needs a 2" clearance from all masonry,
otherwise here is what you can expect.**

So inspect for it.



The 2' clearance applies anywhere the hardboard siding is in contact with masonry products.

If clearance was not maintained, be sure to probe for expected deterioration.



Hardboard siding is never to be installed between the deck attachment to the house band as shown in these pictures.

What would you expect to find in these pictures?





Note the roof to wall step flashing is installed behind the window trim – conducive to allowing water infiltration as noted by the water stains on the lower 2 - 3" of window trim.



Noted the front entrance stoop is poured against the hardboard siding – miss application from manufacturer's installation guidelines.
Note the decay that has occurred around stoop.

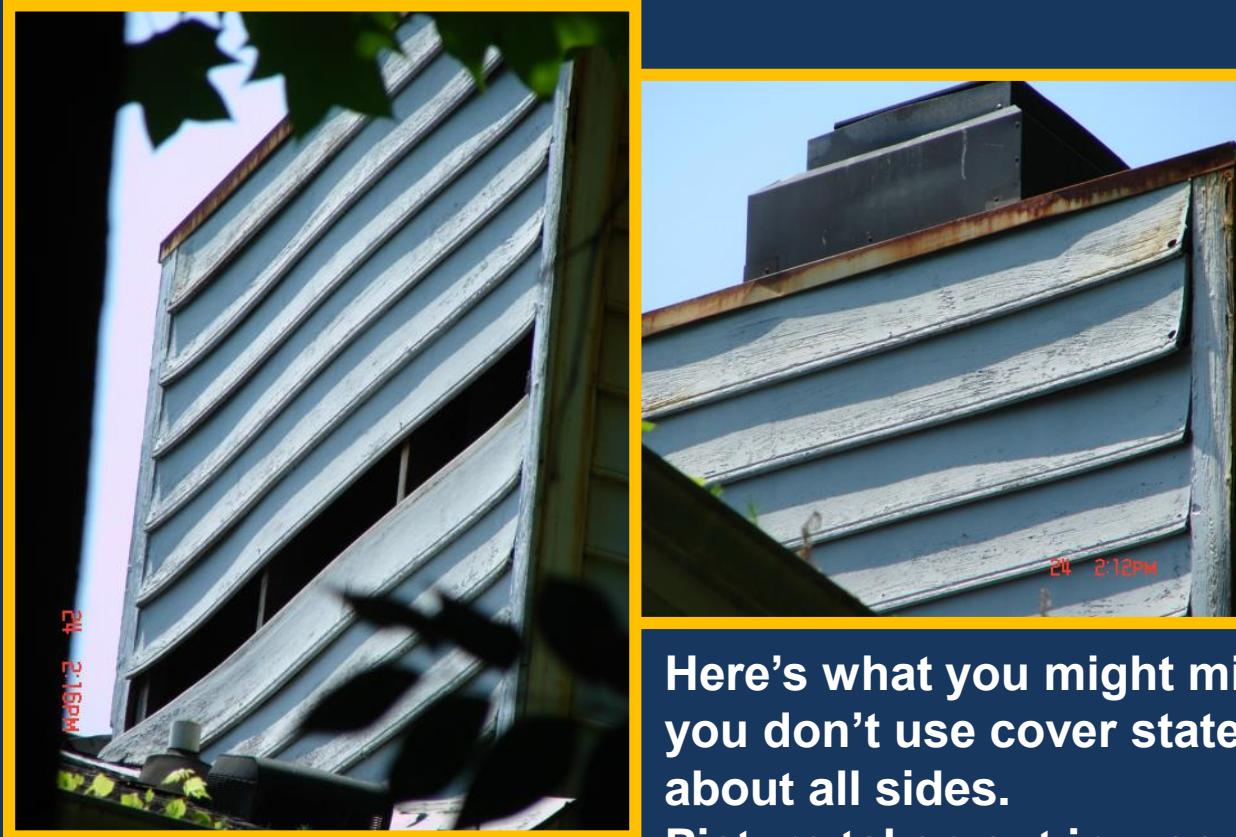


Results from lack of maintaining sealant and protective coating on wood and siding.





**Do you make sure
you see all sides of
an object?
If not, do be sure you
state limitations?**



**Here's what you might miss if
you don't use cover statement
about all sides.
Picture taken out in woods
about 200' from house with
30x zoom camera.**

Siding Ground Clearances – Defect Recognition

Should you look further in this application?





Note wood destroying insect damage from improper ground clearance.



Wide spread wood destroying insect damage.



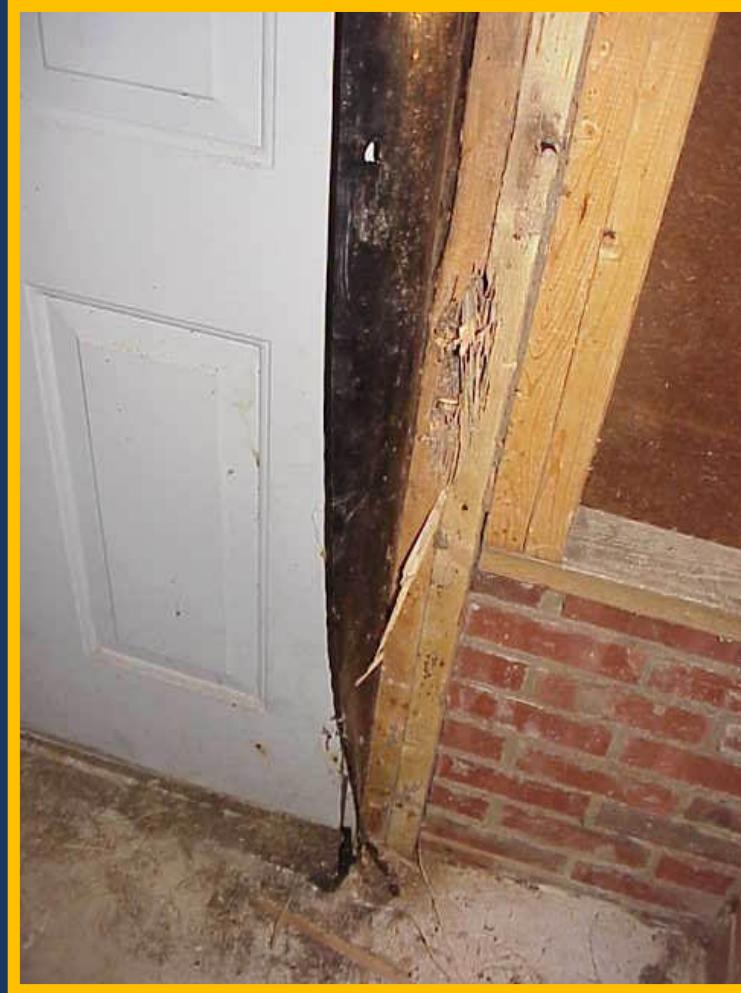
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Wood destroying insects infiltrated door frame from where wood was in contact with the ground.



**Wood destroying
insects infiltrated
door frame from
where wood was
in contact with the
ground.**



Common Problems – Hardboard Siding

- ▶ Improper ground clearance
- ▶ Improper gaps at siding-to-siding butt joints and at siding to trim joints,
- ▶ Improper clearance to shingle tabs.
- ▶ Improper flashing detail at roof to wall seams.
- ▶ Improper gaps and applied sealants around siding to window joints, window jamb/moulding to sill seams.
- ▶ Improper paint thickness on siding.
- ▶ Improper paint on bottom edges to seal drip points of siding.
- ▶ Countersunk nail heads with improper repair if countersunk.
- ▶ Siding in contact with concrete masonry products, foundation walls, porch slabs.
- ▶ Improper siding clearance to deck boards.

Wood Siding

Wood Siding

- › Cedar is the most popular wood for siding shingles.
- › Shingles are most frequently laid in horizontal courses with equal exposures to the weather.
- › The usual exposure on siding shingles is 5 to 6 inches.
- › Shingles expand across the grain when they are wet, therefore they must be laid with their joints spaced or they may buckle.
- › Siding should be kept six inches from the ground.
- › Framing members should be separated by at least eight inches in any area where termites are common.
- › Wide vertical board nailed over narrower vertical strips is called batten and board siding.
- › The minimum lap for bevel siding is one inch.
- › The usual thickness of plywood siding panels is 3/8 to 5/8 inch.
- › The maximum recommended weather exposure with single course, 18-inch wood shakes, is 8 ½ inches.



What are the issues in these pictures?



46

The lack of staggering the lap joints in the left picture.

The fact that the chimney was built over the siding and conducive to allowing water to run between the siding and the chimney.

Improper installation detail.



Common Problems – Wood Siding

- ▶ Improper Ground Clearance
- ▶ Attraction to Wood Peckers -
Wood Pecker Holes
- ▶ Splitting

Vinyl Siding



HOME INSPECTION
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SEMINARS LLC

Vinyl Siding

- ▶ In general any seam of vinyl to dissimilar material should be sealed.
- ▶ Most window manufacturers require sealant between “J” channel and window & door mouldings.
- ▶ Siding lap joints should be joined and not pulled loose.
- ▶ Siding along bottom of starter strip should be secure.
- ▶ Lap joints of vinyl corner trim should be overlapped as trim is installed up wall, in order to always divert rain water to outside of trim – never allowing water to infiltrate behind joint.

TYPICAL INSTALLATION INSTRUCTIONS FOR VINYL NEW CONSTRUCTION WINDOWS

FAILURE TO FOLLOW THESE INSTALLATION INSTRUCTIONS VOIDS MANUFACTURER'S WARRANTY

- 1) WINDOW MUST REMAIN LOCKED UNTIL ALL SIDES HAVE BEEN SECURED WITH FASTENERS. THROUGHOUT INSTALLATION, KEEP THE WINDOW JAMBS PLUMB AND SQUARE. KEEP HEAD AND SILL LEVEL AND SQUARE. MAKE SURE HEAD AND SILL ARE NOT CROWNED UP OR DOWN.
- 2) CONSTANTLY CHECK WIDTH AT MEETING RAILS (i.e. DOUBLE HUNGS) TO AVOID "BOWED OUT" INSTALLATION.
- 3) APPLY GENEROUS BEAD OF **CAULK** ALONG INTERIOR SURFACE OF NAILING FIN ON ALL SIDES PRIOR TO SETTING WINDOW INTO OPENING.
- 4) PLACE 1/4" THICK SHIMS AT SILL CORNERS AND SET WINDOW ONTO SHIMS. CENTER THE WINDOW IN THE OPENING ALLOWING A 1/4" GAP BETWEEN WINDOW AND FRAMING MATERIAL ON EACH SIDE. WHEN INSTALLATION IS COMPLETE, THESE SHIMS MAY BE REMOVED.
- 5) INSTALL FASTENERS (STRAIGHT, NOT ANGLED) IN EVERY OTHER FASTENER SLOT STARTING AT THE MIDDLE OF WINDOW. FASTENER MUST BE IMBEDDED INTO SOLID WOOD A MINIMUM OF 1" DEEP.
- 6) **CAULK** OVER FASTENERS AND ANY FASTENER SLOTS NOT USED.
- 7) **CAULK** OUTSIDE PERIMETER OF INSTALLED WINDOW.
- 8) INSULATE AROUND INSIDE PERIMETER WITH BATT TYPE INSULATION.
DO NOT USE EXPANDABLE FOAM. THE USE OF EXPANDABLE FOAM WILL VOID WARRANTY.
- 9) FOR ANY INSTALLATION FINISHED WITH BRICK OR STONE, ALLOW 1/4" GAP AT SILL BETWEEN STRUCTURE AND WINDOW. THEN, CAULK THIS GAP.
- 10) **CAULK** GAP BETWEEN INSTALLED WINDOW EXTERIOR PERIMETER AND J-CHANNEL (OR BRICK OR OTHER EXTERIOR FINISHING MATERIAL WHICH SURROUNDS WINDOW).

IMPORTANT:

IT IS THE RESPONSIBILITY OF THE OWNER, ARCHITECT, OR BUILDER TO SELECT PRODUCTS IN COMPLIANCE WITH APPLICABLE LAWS AND BUILDING CODES.

DO NOT USE MURIATIC ACID ON HOMES AFTER INSTALLING THIS WINDOW. THE ACID MAY DESTROY THE COIL SPRING BALANCE SYSTEM. WINDOWS WILL NOT BE UNDER WARRANTY IF EXPOSED TO MURIATIC ACID.

DO NOT LAY WINDOWS FLAT OR STORE IN SUN BEFORE INSTALLING.

ALL WARRANTIES NULL AND VOID IF ANY VERTICAL HOLES ARE PUT INTO WINDOW SILL AREA OF ANY M.I. OR CAPITOL WINDOW.

CAUTION: SOME LAWS AND BUILDING CODES REQUIRE SAFETY GLASS BE USED NEAR DOORS AND FLOORING, UNLESS SPECIFICALLY ORDERED, THE MANUFACTURER'S NEW CONSTRUCTION WINDOWS ARE NOT MADE WITH SAFETY GLASS, AND, IF BROKEN, THE GLASS MAY SHATTER AND CAUSE INJURY.

MIP-511

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From the Vinyl Siding Institute

- ▶ **Basic Installation Rules**
- ▶ **Before getting started, it is important to review several rules of thumb for vinyl siding application. The following rules, which come up throughout this guide, are critical for proper vinyl siding installation:**

From the Vinyl Siding Institute

- 1. Installed panels and accessories must move freely from side to side.**
- 2. When installing a siding panel, push up from the bottom until the lock is fully engaged with the piece below it. Without stretching the panel, reach up and fasten it into place.**
- 3. Fasten nails or other fasteners in the center of the nailing slot and make sure the fastener penetrates a minimum of 3/4" (19mm) into a nailable surface.**
- 4. Do not force the panels up or down when fastening in position.**

From the Vinyl Siding Institute

5. Do not drive the head of the fastener tightly against the siding nail hem. Allow approximately 1/32" (0.8mm) (about the thickness of a dime) clearance between the fastener head and the siding panel. Make sure the panels can move freely back and forth. Drive fasteners straight and level to prevent distortion and buckling of the panel.
6. Leave a minimum of 1/4" (6.4mm) clearance at all openings and stops to allow for normal expansion and contraction. When installing in temperatures below 40° F/4.4° C, increase minimum clearance to 3/8" (9.5mm).
7. Do not caulk the panels where they meet the receiver of inside corners, outside corners, or J-trim. Do not caulk the overlap joints.

From the Vinyl Siding Institute

8. **Do not face-nail or staple through siding. Vinyl siding expands and contracts with outside temperature changes. Face-nailing can result in ripples in the siding.**
9. In re-siding, furring or removal of uneven original siding may be necessary; take appropriate actions to ensure a smooth and continuous surface.
10. In new construction, avoid the use of green lumber as the underlayment. Keep in mind that siding can only be as straight and stable as what lies under it.
11. The installation of specific products may differ in details from the instructions given in this manual. Always follow the manufacturer's instructions, using parts specified by the manufacturer, to ensure proper installation.

From the Vinyl Siding Institute

► Fitting Under Windows

- To mark the section to be cut, perform the following:**
- Hold the panel under the window and mark the width of the window opening on the panel. Add approximately 1/4" (6.4mm) to both sides to allow for expansion and contraction of the siding. These marks represent the vertical cuts.**
- Lock a small piece of scrap siding into the lower panel next to the window. This will be used as a template for the horizontal cuts.**
- Mark it 1/4" (6.4mm) below the sill height.**
- Transfer the horizontal measurement to the panel, which will be installed under the window. Measurement may not be the same on both sides of the window.**

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- ▶ Cut the panel with tin snips and a utility knife.
- ▶ The cut panel is now ready for installation under the window. Perform the following:
- ▶ Using a snap lock punch, punch the vinyl siding along the cut edge every 6" (152mm) so the raised lug is on the outside face.
- ▶ Install utility trim under the window, as a receiver for the cut siding. Utility trim is used any time the top lock has been removed from the siding.
- ▶ Furring may be needed to maintain the face of the panel at the desired angle.

From the Vinyl Siding Institute

► Eaves Treatment

- The last course of siding may be cut to fit the eaves opening (Fig. 47). Measure from the soffit to the base of the upper lock on the previous course of panels. Subtract 1/4" (6.4mm). Mark this dimension on the panel to be cut, measuring from the bottom edge of the panel. It is a good idea to check the dimension in several locations along the length of the wall. Using a snap lock punch, punch the vinyl siding along the cut edge every 6" (152mm), so the raised lug is on the outside face. Push the siding into the utility trim that has been nailed in place along the top of the wall. Furring may be needed to maintain the face of the panel at the desired angle. The raised lugs will catch and hold the siding firmly in place.

Sidewall Flashing at Roof Lines

- Run the siding until the last full course under the roof area.
- Cut a diverter from aluminum trim sheet, making sure it sits on the nail hem of the last full course (Fig. 43). Make sure the diverter is placed inside the receiving pocket of the vertical J-channel and is tucked behind the nail hem of the J-channel following the roofline for best drainage.
- If a water-resistant barrier is present, a cut should be made in that barrier to allow the diverter to slip behind the roof step flashing and the J-channels. That cut will need to be sealed with tape (approved by the housewrap manufacturer) once the diverter is installed.
- As an alternative to the diverter, create a "kickout" from metal flashing, as shown in Fig. 44.

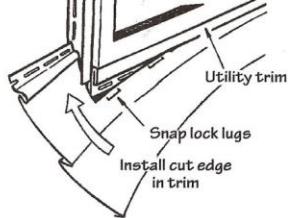


Figure 42.

NOTE: "Kickout flashing" (Fig. 44) is an additional flashing strip that extends beyond the edge of the fascia that is required in some cold-climate localities.

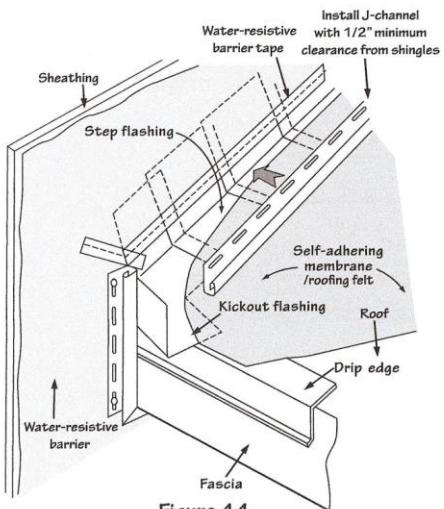


Figure 44.

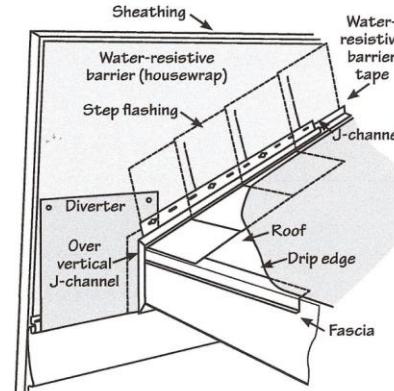


Figure 43.

Vinyl Siding - Defect Recognition

Noted no sealant applied along the vinyl “J” channel to wooden door frame seam.

No sealant applied along the door threshold to doorjamb seams.



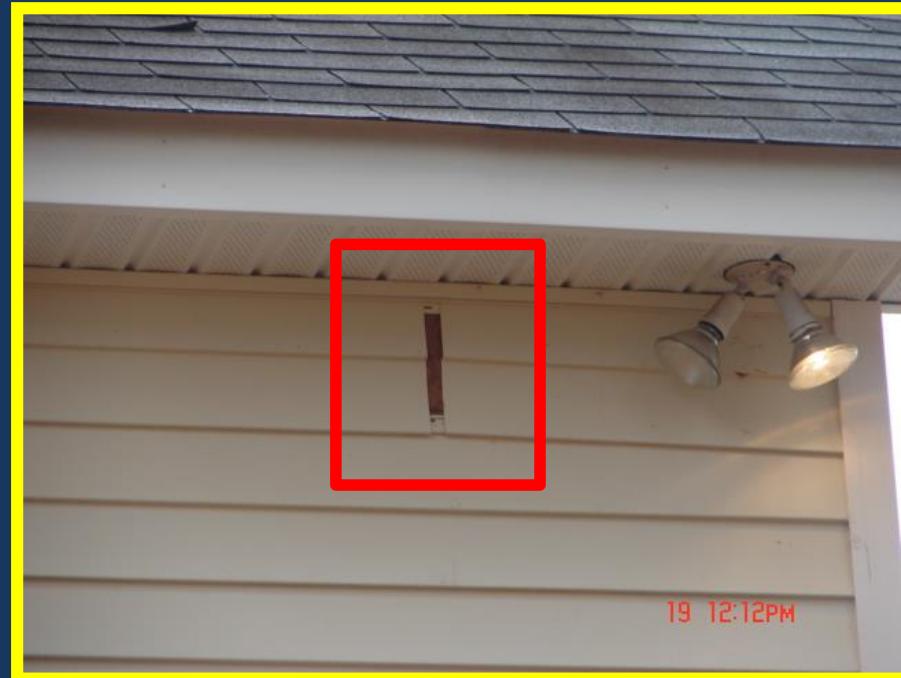




Floor decay and damage resulting from lack of proper sealants.



**Improper lap joint
conducive to
allowing water
infiltration behind
the vinyl cladding
and noted that
there is no
weather resistive
barrier (house
wrap installed
behind the
cladding systems.**





Improper gap allowance between end pieces of vinyl siding leaving large exposed gaps that are conducive to allowing water infiltration behind the cladding system.

**Improper folds in
the vinyl “J”
channel at top or
window corners to
ensure that water
flows down the
exterior of the
cladding system.**

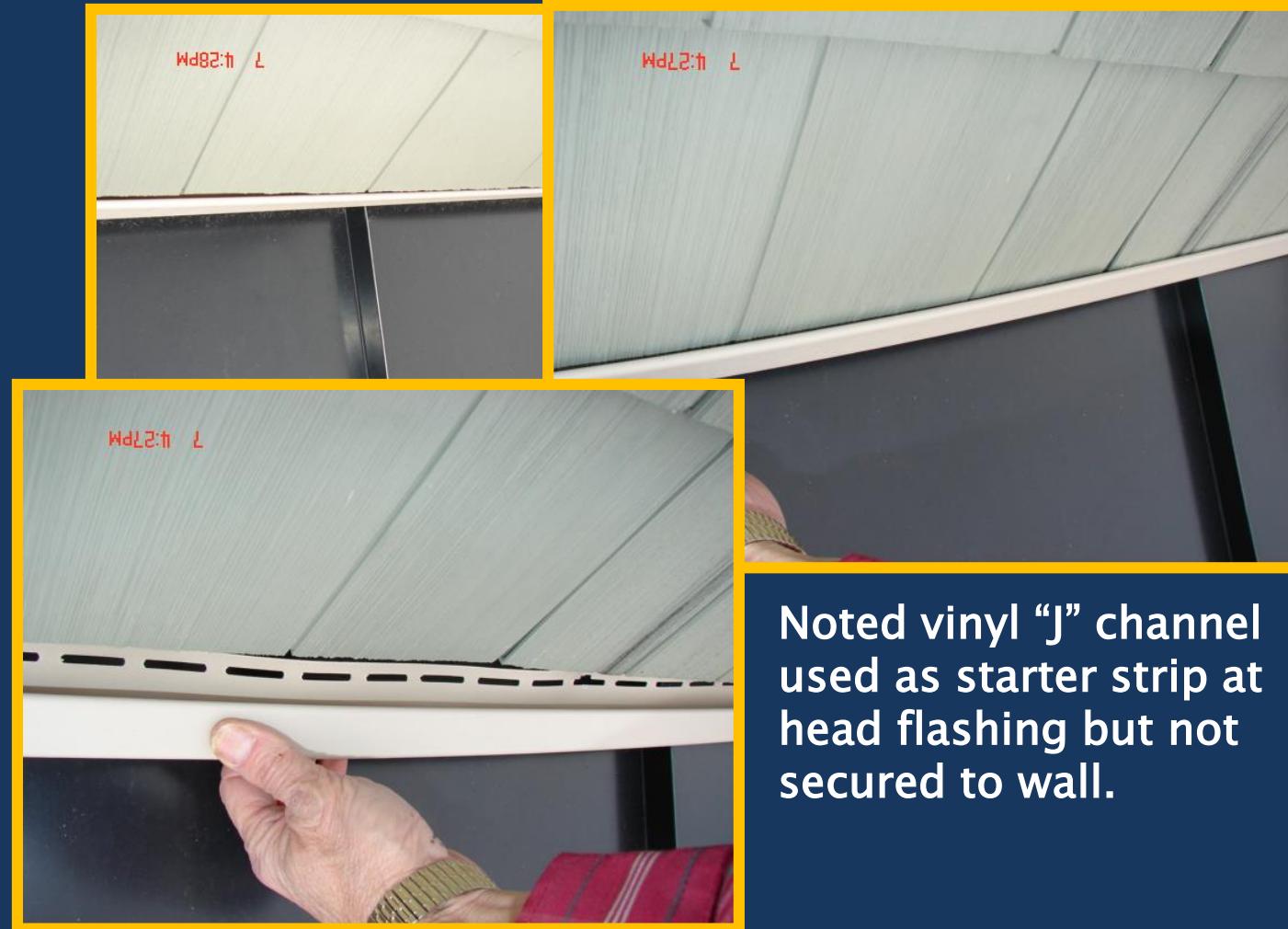
**Noted open hole in
the upper right
corner of the vinyl
“J” channel trim.**



Note gap along the vinyl “J” channel to the aluminum rake trim – conducive to allowing water infiltration

Note the gap between the vinyl siding and the “J” channel trim where the siding has open gaps – conducive to allowing water infiltration.





Noted vinyl “J” channel used as starter strip at head flashing but not secured to wall.



Noted vinyl "J" channel used as starter strip at head flashing but not secured to wall.

Note the vinyl corner trim on the fireplace is not secured to the wood frame of the fireplace and allows the vinyl to pull out from corner trim – conducive to allowing water infiltration.



Warped Siding from Reflective Heat



Don't Believe it?
Watch!!

Warped Siding from Reflective Heat



Note the temperature gradient from the shades areas to the reflected hot sun. (40 F vs 161 F)
Will cause warping of vinyl pieces.

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