HOW-TO BOOKLET #3037

PAINT PROBLEMS

TOOL & MATERIAL CHECKLIST

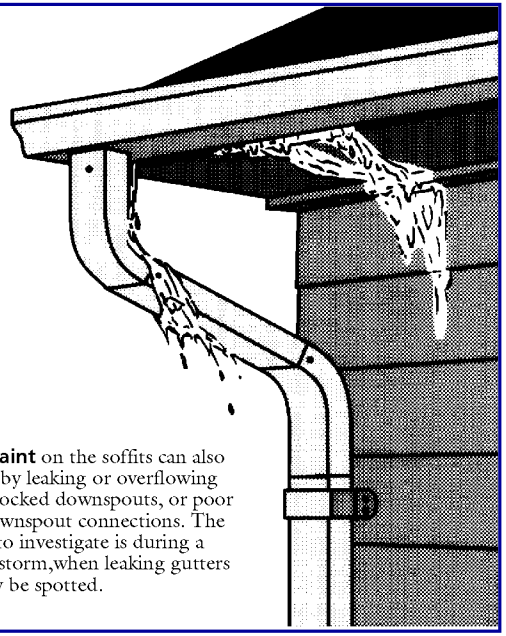
- ❑ Putty Knife
- ❑ Pull Scraper
- ❑ Shellac
- ❑ Paint/Brushes
- ❑ Stepladder
- ❑ Wire Brush
- ❑ Fungicide
- ❑ Sandpaper
- ❑ Mildew Remover

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.

When you attempt to identify and cure a paint problem, there are three important points to keep in mind:

- Most so-called "paint problems" are not caused by the paint. Today's paints, whether latex, acrylic, alkyd or oil-based, are carefully formulated to cover just about anything. Paint chemists have developed paints to withstand just about any kind of weather in any part of the country and are continually improving quality. When you do encounter a problem, you may need to do some detective work because the paint itself rarely, if ever, fails.
- The best way to solve paint problems is to prevent them by carefully preparing the surface to be painted. If paint is to adhere, the surface must be clean, dry and properly primed. Time spent on careful preparation will be more than repaid in the long run. And you probably won't have to refer to "Paint Problems" in the future...
- When you do use this booklet to diagnose a particular paint problem and find a way to solve it, follow the instructions and suggestions carefully. Most experienced house painters and paint dealers agree that if time and attention are not given to getting to the root of the problem, it will almost certainly occur again.

Fig. 1



Peeling paint on the soffits can also be caused by leaking or overflowing gutters, blocked downspouts, or poor gutter/downspout connections. The best time to investigate is during a heavy rainstorm,when leaking gutters can readily be spotted.

TAKE A GOOD LOOK

Because paint problems are usually highly visible, the illustrations in this booklet will help you to readily identify the specific nature of your problem. You will find that moisture of one kind or another is behind most paint problems, but that obvious rain, snow, frost and other weather-related moisture are not the primary villains.

Today's homes benefit from greatly improved insulation, weather stripping, caulking and other materials that conserve heat or cooled air on the inside, but these same materials may have "side-effects" that show up in the paint on the outside.

The very same products which so effectively seal out the weather, seal in the moisture created in kitchens, bathrooms and laundry rooms. If adequate ventilation is not provided, water vapor created in the home has no alternative escape except to penetrate the walls. In doing so, the moisture may, in effect, "pop" the paint on the exterior siding.

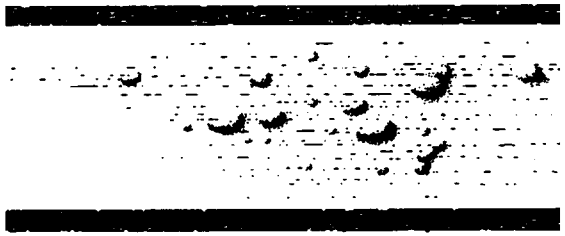
CLUES TO TRAPPED MOISTURE

If blistering or peeling is localized on the siding on the outside wall of a bathroom or laundry room, it is generally an indication that better ventilation must be provided in these rooms or, especially in older homes, that a more effective vapor barrier is needed.

Greatly improved ventilation can be achieved by installing ducted ventilation fans, but even opening a window will provide water vapor with an escape route. If exterior walls lack a vapor barrier, two coats of non-permeable, oil-based paint on the walls of a room will provide a satisfactory interior barrier.

Peeling paint on soffits (**Fig. 1**)(the underside of the eaves) may also indicate that excess moisture from the interior is not adequately vented. Soffit vents and screens, available at building supply stores, will alleviate the problem.

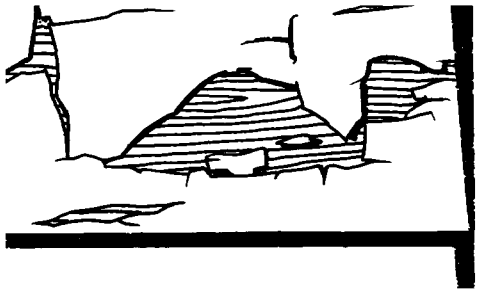
COMMON MOISTURE-RELATED PAINT PROBLEMS, CAUSES & SOLUTIONS

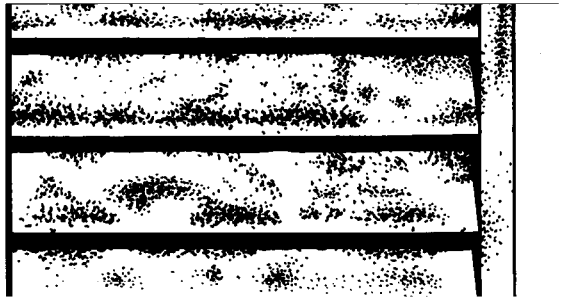


PROBLEM: Blistering and peeling (an extension of blistering), usually on exterior siding and woodwork.

CAUSE: Blisters pop up when moisture trapped beneath the paint expands and creates bubbles in the paint. The source can be dampness in the wood when the paint was applied or excess moisture that escapes through the walls when it is not adequately vented from a home's interior. Blisters may also appear if the paint was applied in direct sunlight, trapping solvent vapor as the paint dries too quickly. Peeling occurs when the blisters finally burst and the paint curls away from the surface.

SOLUTION: Scrape and sand to bare wood. Repaint only when the wood is completely dry. This may require some corrective measures to improve interior ventilation. If preventative measures are not taken, the problems will almost certainly recur. The use of a water-based latex paint is recommended because it is porous and will allow interior moisture to escape.

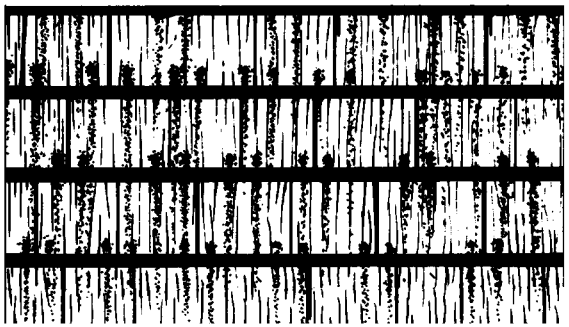




PROBLEM: Mildew, a fungus-caused discoloration that has a green or black splotchy, dingy look.

CAUSE: In most cases, a combination of moisture, low light and inadequate ventilation.

SOLUTION: Scrub vigorously with a mildew remover such as trisodium phosphate (available where paints are sold) or with a solution of household bleach, detergent and water. Wear rubber gloves and protective glasses. Repaint, when completely dry, with paint to which a fungicide has been added.



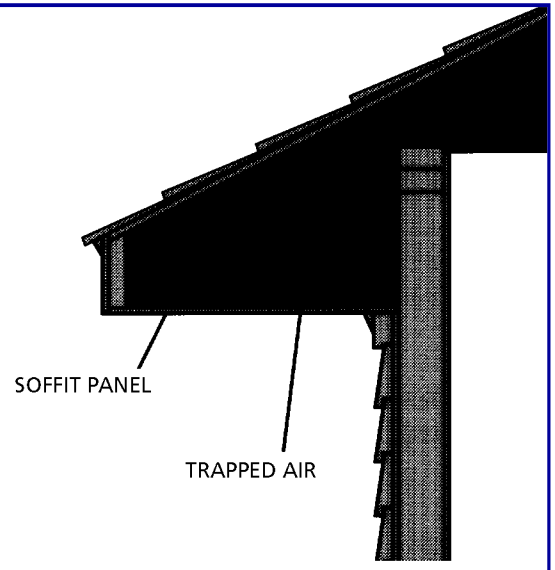
PROBLEM: "Bleeding", rust-colored stains.

CAUSE: Non rust-resistant nails which were not properly sealed before painting or which "popped" over a period of time. Moisture then causes the nail to rust and stain the paint.

SOLUTION: If the nails are firmly set, sand down to expose the nail head, seal the head with pigmented shellac, then repaint. If the nails have popped, remove them, replace them with new, slightly larger, rust-resistant nails and repaint.

Having addressed the cause of the problem, you can now repair the blistered or peeling paint. Try to do this when the weather is dry, ideally, at the end of the summer.

1. Scrape the top of the blisters and the loose peeling paint with a putty knife, pull scraper or wire brush.
2. If the newly exposed surface is damp, allow several days for it to dry out.
3. Sand down the dry surface to a sound undercoat or to the bare wood, if necessary. An orbital sander may be used, but do not use a belt or disc sander, which may damage the surface underneath.
4. Fill any depressions with fine surface filler and sand lightly.
5. Apply a new undercoat and top coat. Do not repaint if the weather is especially humid or if rain is expected.



Inadequate ventilation inside a house will often trap air in the space above the soffits. Moisture in the trapped air will escape through the soffit panels, causing the exterior paint to peel.

6. If you have not been able to totally correct the cause of the original problem, use several light coats of latex paint as a primer, allowing it to dry thoroughly between coats. This will provide a permeable surface through which water vapor will be able to pass.
6. Apply the new top coat and check it periodically over the next several months. If you find signs of new blistering or peeling, you will know that there is still a source of moisture to be found. It might then be necessary to call in an expert to look for roof or gutter problems that may be causing water to leak down inside the walls.

MILDEW REMOVAL

What appears to be a dirty stain on painted surfaces may turn out to be mildew. Mildew is a fungus that thrives in damp, shady spots and can live on oil-based paint. Its stubborn spores imbed themselves in a surface and will not give up to scrubbing with a mere detergent. Mildew has a habit of coming back again and again if it is not properly treated.

Before you attempt to treat the mildew itself, examine the conditions in the area where it was found. Shrubbery that is too close to the house, or which cuts out the sunlight completely, should be trimmed so that ventilation is improved. Leaking or overflowing gutters could also be providing the damp conditions that mildew needs.

On internal walls, mildew is most often found in the basement, where the problem is usually related to an exterior drainage problem. Try to solve the dampness problem before you treat the mildew.

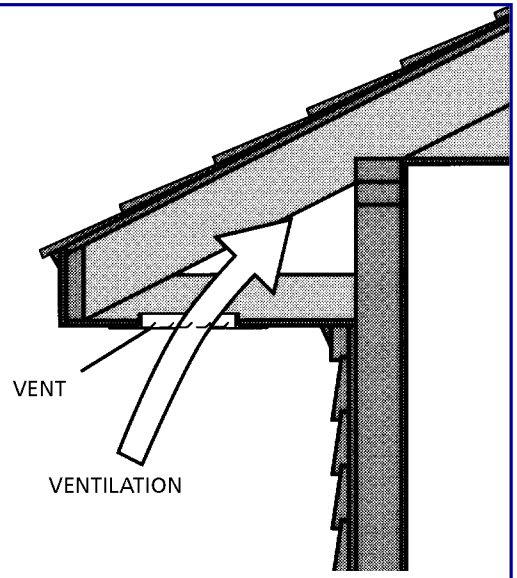
On both inside and outside walls, the basic treatment of mildew is the same.

1. First, heavy mildew should be vigorously brushed away with a stiff wire brush.
2. Then thoroughly scrub the surface with a solution of a) Trisodium Phosphate, available in most area from paint dealers, or, b) a solution of one quart chlorine bleach mixed in three quarts of water, or, c) a premixed commercial mildew remover.

Scrub very vigorously, but wear rubber gloves and protective glasses to protect your hands and eyes as you scrub. Allow the solution to remain on the surface for a few minutes, then rinse the surface thoroughly and allow it to dry for at least two days.

3. Repaint with paint that contains an antimildew ingredient or add a fungicide yourself. It can be purchased from paint dealers–simply follow that manufacturer's instructions.

A final word of caution. The best antimildew paint will not be effective if it is applied to a surface from which old mildew has not been thoroughly removed. If any mildew spores remain, you can be assured that they will soon multiply and reappear.



The installation of simple soffit vents or screens, at intervals around the perimeter of the house, will provide the ventilation needed and will prevent paint peeling caused by interior vapor build-up.

EXCESSIVE CHALKING

Chalking is a feature, rather than a problem, common to many latex exterior paints. The paint is actually formulated to gradually decompose over time. As the binders and resins wear away, the pigments in the paint are released as a very fine powder. With each rainfall some of this powder is washed away, taking surface dirt with it.

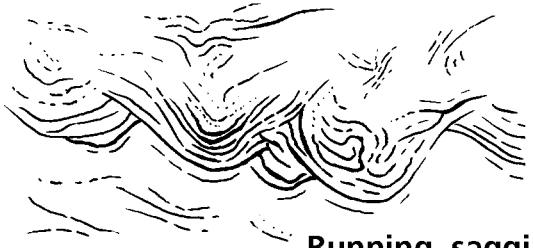
This "self-cleaning" process helps to keep exterior paint looking bright, but it can also create problems in some circumstances. Self-cleaning paint should not be used on siding or trim above a brick or masonry surface. As the powdered pigments wash away, they can leave unsightly stains on brick walls, as is shown in the illustration above.

Self-cleaning paints are not recommended for dry climates, where lack of rain can result in excessive chalk build-up. Elsewhere, excessive chalking is usually due to inferior paint and can be removed with a bristle brush and a good scrubbing.

The powdery surface chalk, or the residue that has washed down onto masonry, should be washed with a detergent solution, then rinsed with clear water. If new latex paint is to be applied, a special chalk-absorbing primer should be used first. Your dealer can help you choose the right paint for your application. If an oil-based paint is used, two coats should be applied.

The run-off of excessive chalking on a brick wall.

MORE COMMON PAINT PROBLEMS, THEIR CAUSES AND SOLUTIONS



Running, sagging

PROBLEM: Running, sagging, wrinkling, or generally droopy, wavy looking paint.

CAUSE: This problem is almost always the result of a too-heavy application of paint. This can either be caused by paint that is too thick or by heavy-handed painting.

SOLUTION: It is best to check for signs of sagging or running as you paint. If you catch them before the paint is dry, you can usually brush out any runs or sags. Thinning the paint will help if too much paint seems to cling to the brush. If the paint has dried, the only way you can do away with the wrinkles is by sanding them and repainting–lightly.

Checking

PROBLEM: Checking-long, evenly spaced cracks, usually appearing horizontally in painted siding.

CAUSE: Most often found in older homes checking in the result of the natural shrinking and swelling of building materials over a period of time, especially when many layers of older, inflexible paint are present.

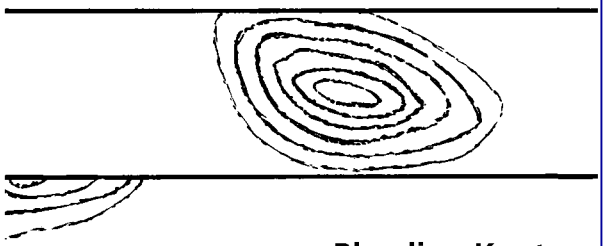
SOLUTION: There is really only one way to remedy the problem–remove the existing paint, prime and repaint with one of the many modern, flexible paints.

Alligatoring

PROBLEMS: Alligatoring or rough scales that look like a reptile's skin.

CAUSE: Second coat was applied over an incompatible paint or over a still-wet first coat. The second coat did not form a satisfactory bond and will ultimately flake off.

SOLUTION: Scrape, sand to bare wood, prime and repaint, making sure that first coat is thoroughly dry and does not contain too much oil.



Bleeding Knots

PROBLEM: Bleeding knots, usually circular-shaped discoloration in stained or painted siding.

CAUSE: Resin, dissolved by solvent in the paint, that has worked its way to the surface from improperly sealed knots in woodwork or siding.

SOLUTION: Strip and sand down to the knots or pitch pockets in the wood. Apply sealer or shellac to the knots, then prime and repaint.