

# Preventing Frost Crack on Trees

Helping Your Trees Survive Winter

## The Condition

Cracks and splits in tree trunks are fairly common and may occur for various reasons. Splits can occur on the trunk of the tree as well as on branches. Trees most susceptible to this type of injury are those which are thin-barked, newly planted (under 5 years in the ground), planted in open isolated winter sun exposed sites, installed in heavy or wet clay soils, suffered some minor trunk injury from weed whips or lawn mowers, been severely pruned of lower branches, been fertilized in late spring producing excessive new late season growth, suffered root damage due to improper watering (running lawn sprinklers too often), or were drought-stressed the previous season.

When growing under a lot of stress many trees, including sycamore, ornamental crabapple, ash, beech, tulip trees, all fruit trees (apples, peaches, pears and cherries), almost all varieties of maples (Norway, sugar, red sunset, and even autumn blaze) will crack.

One of the most common reasons for cracks and splits on tree trunks is cold temperature. These cracks are caused when the inner and outer wood in the tree's trunk expands and contracts at different rates when temperatures change. This happens when winter temperatures plummet below zero after a sunny period when the tree's trunk was warmed by unseasonably warm winter days. The different expansion rates between the inner and outer wood can cause such a strain on the trunk that a crack develops. Frost cracks often do not seriously hurt trees although they provide openings where certain disease organisms may enter, particularly if a tree may be growing in a stressed location. Many of these situations were addressed in the opening paragraph. For large, serious cracks a professional arborist can bolt the cracks shut with a technique called "lip bolting".

A frost crack can develop on any side of a tree, but the south or west are the most common. Frost cracks are ideal hiding places for insects such as carpenter ants or wood borers. These insects do inflict serious damage to a tree.

Wrapping trunks on newer trees with light colored paper tree wrap may help prevent cracking. Some homeowners who have trees in new developments where protection is minimal will "top" the paper tree wrap with one of the expandable plastic spiral protectors that are almost always white in color to help reflect the winter sun's heat. Always remove the wrap by April 15th. Fertilize trees only after foliage has colored and/or dropped from the tree. Use either Fertilome's Tree and Shrub Food or Milorganite. Auger holes into the ground 8-10" deep and space 18" apart. This concept will deliver the fertilizer to the roots where it is stored until spring growth begins.



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