Piper PA22-150, Corroded Nose Gear Mount

A mechanic states, *he* found the nose gear mount (P/N 13034-00) corroded, and quite thin in spots on the lower tubes *(referenced from the inside).* The wall thickness originally was 0.049 inches, and in the thin spots, the wall thickness was less than 0.020 inches. We welded the mount to repair it, one particular weld was a cold weld that cracked, allowing moisture into the inside of the tubing. The aircraft's annual inspection was 35-hours before the failure. It failed on a soft-field landing, after an engine malfunction and caused substantial damage. In my opinion, the thin wall from the corrosion is why the mount failed.

"My recommendation to prevent such recurrences is to inspect all welds for cracks, especially any field repairs. These welds should be examined for the quality of the weld (to ensure there are no like cracks and pinholes) during the annual or 100-hour inspections; the punch test can be utilized at this time. Any welds or repairs in question should be performed again as necessary.

The punch test information in Piper Service Bulletin 528D and AD 99-01-05 (latest revision) on the wing strut can be used and adapted to determine if the nose gear mount needs replacement or repair due to internal corrosion.

Part Total Time: (unknown).