

Use our checklist to find out.

Even the most robust industrial equipment experiences wear and tear. Expansion joints are crucial components in piping systems, allowing for movement and mitigating stress. But how do you know when they're due for replacement?

EJMA advocates for careful inspection, adherence to standards, and robust, customized maintenance schedules to determine replacement needs. Our checklist helps you identify key signs of expansion joint failure, ensuring the integrity of your operations and preventing costly downtime.

## Replacement Expansion Joint Checklist:

- ☐ **Visual Signs of Wear:** Look for cracks in welds, bulges, thinning of the material, distortion or yielding of hardware and bellows (squirm), corrosion (rust) or other visible signs of deterioration. These are often the first indicators of a problem.
- ☐ **Leaks or Weeping:** Any sign of fluid escaping or loss in pressure, no matter how small, points to a compromise in the expansion joint's seal. This is a crucial aspect of leak detection.
- ☐ **Hardening or Loss of Flexibility:** A fabric or rubber expansion joint that feels rigid or has lost its ability to flex is no longer effectively absorbing movement, leading to increased stress on your system.
- ☐ **Excessive Vibration or Noise:** Unusual industrial equipment vibration or new noises originating near the expansion joint can signal internal damage or improper function.
- ☐ **Misalignment or Stress on Adjacent Piping:** If you notice pipes pulling away, bending, sagging or showing signs of strain near the expansion joint, it may not be performing its compensatory role.
- ☐ **Age of the Expansion Joint:** Even without visible damage, aging expansion joints are more susceptible to failure. Proactive replacement based on recommended service life is a cornerstone of predictive maintenance.
- ☐ **Changes in Operating Conditions:** Has the temperature, pressure, or media of your system changed? These shifts can significantly impact the lifespan of an expansion joint and necessitate earlier replacement.
- ☐ **Overall Pipeline Performance:** An expansion joint is an integral part of piping infrastructure: many times a problem with an expansion joint is hiding a deeper issue in the system. For expansion joints to work, guides, supports and anchors must all work together to have an efficient piping system. If one of these support binds fails, it may cause undue stress and premature failure for an expansion joint. Therefore, it is recommended that all components of the system be inspected.

**Don't wait for a critical failure. Proactive maintenance is intelligent engineering.**

If your inspection reveals any of these warning signs or if you're due for a routine assessment, contact our experts.

We provide comprehensive expansion joint solutions, from precise diagnostics to efficient, high-performance replacements. At US Bellows, we see expansion joints as dynamic stress mitigators, vital for long-term reliability. Our teams provide engineered expansion joints for optimal performance, safeguarding your piping infrastructure.

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