

Excavator safety alert

Non-restraining mechanical bolted couplings



Non-restraining mechanical bolted couplings can separate, causing a gas release or rupture. This alert highlights the steps to take if you encounter these older fittings.

Purpose

This communication is intended to increase awareness among excavators, contractors and field personnel about the potential hazards associated with non-restraining mechanical bolted couplings encountered during excavation or maintenance.

Background

Certain segments of older natural gas pipeline systems may contain non-restraining mechanical bolted couplings (sometimes called “dresser-type” couplings). These couplings were historically used to join pipe segments but **do not provide axial restraint** – meaning they rely solely on the integrity of the surrounding soil to hold the pipe in place. When soil is disturbed, removed or vibrated during excavation, these couplings can **separate**, causing a **gas release or rupture**.

Hazard description

- **Type of Fitting:** Non-restraining mechanical bolted coupling (typically, steel sleeves with bolts, gaskets and compression rings).
- **Hazard:** Loss of restraint → pipe pullout → potential gas leak or ignition.
- **Locations:** Commonly found in older low-pressure or intermediate-pressure distribution systems.

Visual indicators

Two pipe ends joined by a metal sleeve with visible bolts/nuts. Often there is no visible weld bead or flange connection. May have manufacturer markings (e.g., “Dresser,” “Style 38,” etc.).



Excavators: what to do if you encounter a bolted coupling

1. STOP WORK IMMEDIATELY.

- Do **not** move, strike or disturb the fitting or the pipe on either side.

2. STABILIZE THE AREA.

- Do not remove supporting soil or backfill around the fitting.
- Prevent equipment vibration or ground movement near the coupling.

3. NOTIFY THE PIPELINE OPERATOR IMMEDIATELY.

- Use the emergency or control center contact number provided on the line marker or your One Call ticket.

4. WAIT FOR AUTHORIZATION before resuming work.

- Only the operator can assess and secure the fitting for safe excavation or relocation.

Smell Gas. Act Fast. Be the one to call 911.

To report emergencies, **call 911** and **National Grid** immediately.
Always **call 911** if you suspect a gas leak!