Modular Transport Incidents

Video Showing Overturned Modular

Overview

This report compiles documented incidents of modular and manufactured homes detaching or overturning during highway transport in the United States, along with engineering evidence regarding axle fatigue and failure risks — particularly when recycled or reused axles are involved.

While some incidents are caused by environmental factors such as wind or sudden braking, others reveal mechanical weaknesses like axle fatigue, undercarriage deformation, and the failure of load-securement systems.

Together, these events highlight the urgent need for NHTSA oversight and regulation of the mechanical integrity of trailers used for modular-home transport and to investigate the ‘Ghost Trailer’, the temporary carrier system never in the NHTSA/DOT system, undetected for 50 years because of a lack of a VIN number, so in essence, it does not exist.

When recycled or rebuilt axles are used in this type of transport, these risks are compounded because:

- The **load history** of the reused axle is typically unknown.
- **Fatigue cracks** may be invisible until catastrophic failure.
- **Improvised welding or modifications** may reduce structural integrity.
- The **original material properties and heat-treat profile** may be altered.
- Axle tubes may have **wall thinning or corrosion** from prior use.

These factors create a *predictable and preventable hazard* during the transport of modular homes, which often operate at or near maximum load ratings for their trailers.

Latest Wreck: Amesbury, Massachusetts

Watch Video Clip

Apr. 20, 2026 — Interstate 495 North near Route 150, Amesbury, Massachusetts — A modular home rolled off a wide-load trailer during a three-vehicle collision involving a tanker truck and passenger vehicle. The structure overturned into the median, causing extensive lane closures and a major recovery operation. Authorities reportedly reviewed load securement and transport

conditions as part of the investigation.

Dec. 8, 2025 — Route 93, Nescopeck, Pennsylvania — A modular home fell off a trailer shortly before 10:00 a.m., striking two vehicles and injuring at least two people. Route 93 remained closed for several hours following the crash.

Sep. 23, 2025 — Highway 14 and Highway 34 Intersection, Aurora, Nebraska — Half of a modular home fell off its trailer near the intersection west of McDonald's, significantly slowing traffic for several hours. Aurora Police reported the transport truck had picked up the modular home from Bonavilla Homes earlier that day.

Sep. 15, 2025 — Marc Basnight Bridge (Highway 12 / Oregon Inlet), Outer Banks, North Carolina — A commercial motor vehicle transporting a modular home detached from its trailer during high winds estimated at 65–70 mph. The structure overturned onto the bridge railing, creating a major traffic hazard.

Oct. 21, 2024 — Interstate 90 Exit 2 Ramp, Albany, New York — A modular home fell from the rear of a tractor-trailer while navigating the on-ramp to Interstate 90, blocking the roadway for several hours.

Jun. 25, 2024 — Westbound U.S. Route 210 (210 Freeway), Pasadena, California — A manufactured home being transported as a wide load toppled off a big rig and collided with another truck, resulting in significant lane closures and traffic disruption.

Sep. 21, 2023 — Southbound Interstate 95, Colleton County, South Carolina — A mobile home being towed experienced an axle-related issue while traveling on I-95. During roadside repair efforts, another vehicle struck the structure, tearing away part of the home and scattering debris across the highway.

May 30, 2019 — Interstate 485, Charlotte, North Carolina — A house being transported on a truck fell off the back of the vehicle and blocked several lanes of Interstate 485 in Charlotte. Emergency crews responded to the scene while traffic slowly passed the structure on the shoulder. Reports indicated only minor injuries resulted from the incident.

(Industry Reports) — Various U.S. Oversized-Load Routes — Industry bulletins and transport-association reports reference multiple incidents involving modular homes or transport structures detaching from trailers during transit, though detailed public reporting is often limited.

Relevant Engineering Studies

1. **"Analysis of Vehicle Chassis Axle Fractures" – MDPI (2023)**
   Demonstrates that semi-trailer axles experience high dynamic stresses that can cause

fatigue and fracture once the yield point is exceeded, especially under road irregularities and uneven loading.

2. **“Truck Trailer Suspension Axles Failure Analysis and Modelling” – Vilnius Tech Journal (2022)**
   Shows that tubular axle geometry, wall thickness, and stress concentration points are critical to load-bearing performance. Fatigue life diminishes rapidly with repeated heavy cycles.

3. **“Axle and Bearing Failure Modes in Heavy Trailers” – U.S. DOT / NTL Report**
   Identifies bearing assembly and structural defects as leading causes of axle-related transport failures.

4. **“Heat Treatment and Fatigue of Trailer Axle Alloys” – ASRJETS (2021)**
   Indicates that microstructural inconsistencies and over-hardening can trigger brittle fractures in reused or repaired axles.

Application to Modular-Home Transport

- **High Dynamic Load Exposure:**
  Modular homes create concentrated weight points that differ from standard freight distribution, placing additional stress on axles and suspension systems.

- **Wind Load and Height:**
  Modular homes have large side profiles, amplifying lateral forces and torsion on the axle assemblies during high-wind or emergency maneuvers.

- **Axle Reuse Practices:**
  Anecdotal reports suggest that recycled or re-used axles (sometimes salvaged from decommissioned manufactured-home chassis) are occasionally employed for cost reasons, despite lacking OEM certification or traceable testing records.

- **Regulatory Blind Spot:**
  There is no federal reporting requirement distinguishing *new*, *rebuilt*, or *recycled* axles on oversize-load transport vehicles.
  This creates an enforcement gap in NHTSA oversight and compromises safety data collection.

A house blocked several lanes of traffic on an interstate in Charlotte, North Carolina, after falling off the back of a truck.

Officials with the North Carolina Department of Transportation expected the interstate to reopen later this afternoon, the spokesperson said.

Newsweek reached out to the North Carolina Department of Public Safety via email for updated information on the wreck. A spokesperson for the Charlotte Fire Department told Queen City News that the tractor-trailer carrying the home collided with another vehicle, causing the home to fall off.

"One car has been pulled from underneath the house. Incredible there were only minor injuries," Bruno said in one tweet which showed a car under the home.

Link

Conclusion

Even without a large dataset of modular-home-specific axle breakages, technical evidence strongly supports the conclusion that **using recycled or rebuilt axles in modular-home transport poses an unacceptable risk** to public safety.

The stresses encountered in this type of transport — combined with unknown fatigue life and lack of standardized inspection for reused axles — increase the probability of in-transit axle fracture, detachment, or loss of vehicle control.

Nov. 4, 2025 Car Crashes Under Truck Carrying Modular Home In Fayetteville

Conclusion

Even without a centralized national database specifically tracking modular-home transport failures, publicly documented incidents demonstrate a recurring pattern of structural detachment, axle-related problems, trailer instability, and transport-system failures during oversized-load operations.

Engineering literature consistently shows that heavy cyclic loading, torsional stress, uneven weight distribution, wind exposure, and fatigue accumulation significantly reduce the reliability of axle and suspension systems — especially when recycled, rebuilt, modified, or insufficiently documented components are introduced into service.

The repeated occurrence of modular-home transport detachments across multiple states strongly supports the conclusion that current oversight, inspection standards, and reporting requirements remain inadequate for the risks posed by oversized residential-structure transport.

Trailer axles and transport assemblies are not designed for indefinite reuse under maximum-load conditions. Every recycled, rebuilt, undocumented, or unverified axle introduced into the modular-home transport chain becomes a potential point of catastrophic failure.

The absence of federal reporting requirements distinguishing new, rebuilt, repaired, or salvaged axle systems creates a preventable gap in national transportation safety oversight. Without standardized inspection protocols, traceable certification records, or incident-specific data collection, regulators lack the information necessary to fully evaluate the risks posed by modular-home transport failures on public highways.

Janet Thome President

Tiny House Alliance USA
janet@tinyhousealliancеusa.org
https://www.newsweek.com/house-blocks-highway-traffic-falling-off-truck-1802735