

Keeping HO Geared Logging Locos Running

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The Situation - Good

- HO Geared Locos readily available
 - Bachmann Shays and Climaxes
 - Rivarosi Heislars (via Hornby now)
 - Several Brass versions as well
- Look awesome when running
- Sound decoders add delight



The Situation - Bad

- Some Tiny Cast Plastic Gear Train Parts Often Break
 - Bachmann Climaxes fail most often
 - Bachmann Shays eventually fail
 - Rivarosi Heislars highly reliable
 - Brass Shay universals can also fail



The Situation - Ugly

- HO Bachmann Shays and Climaxes can break even when not run!
- Gears and Universal Joints split
- High loads may accelerate failures



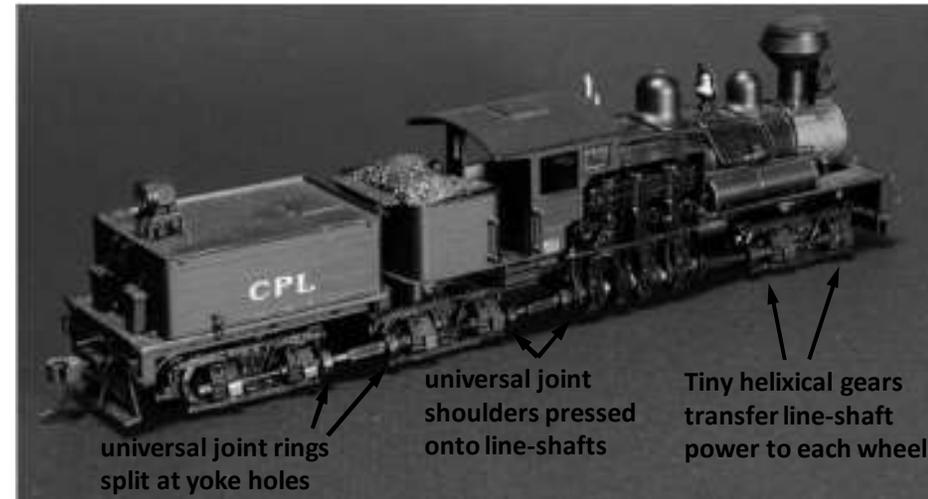
Failure Hypothesis

- Plastic gears too tiny (too weak)
- Press fit shafts = constant tension
- Become brittle as de-plasticize
- Plastic splits sooner or later
- Unknown injection molded plastic
- Heavy loading may accelerate



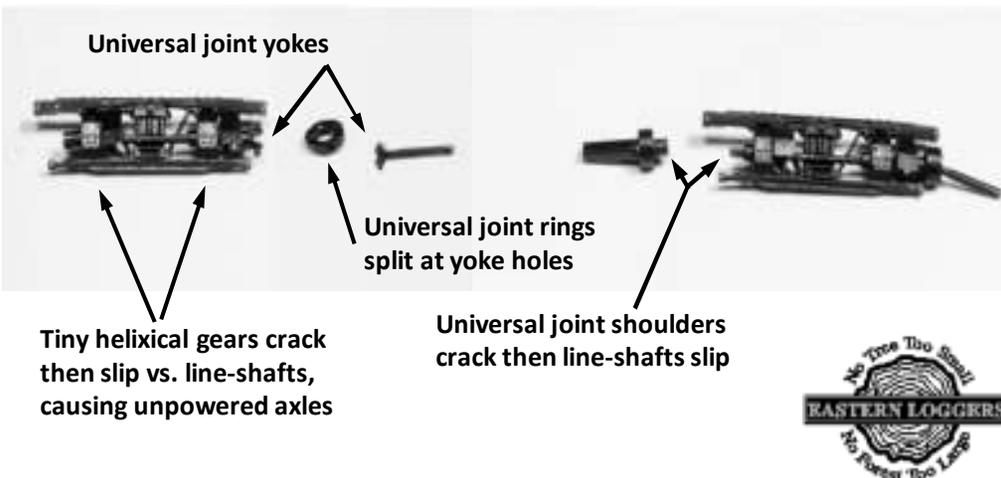
Bachmann Shays

- Tiny line-shaft gears split
- Universal shoulders and rings also split



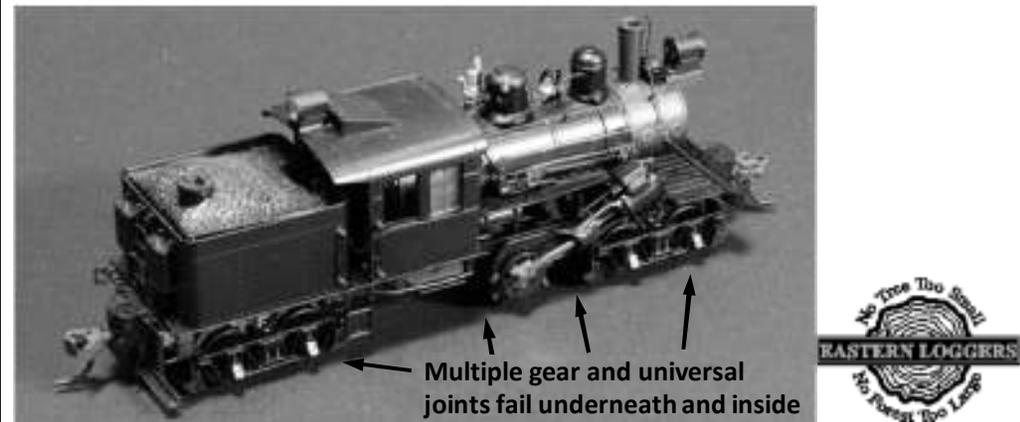
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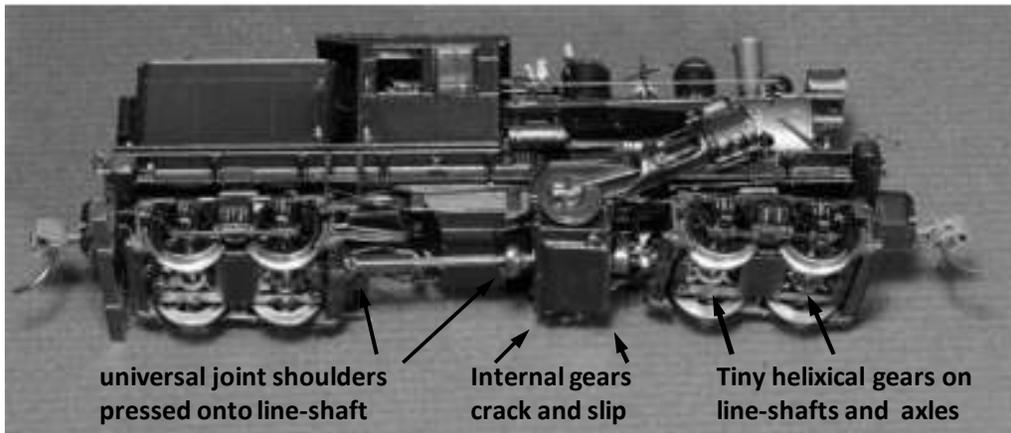
Bachmann Climaxes

- Gears and universals fail like Shays
- Internal gears fail as well
- Extremely difficult to get inside to fix



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Rivarosi Heislars

- Rivarosi Heislars highly reliable
- Don't have tiny cast plastic gears
- Recommend add wheel pickup wipers

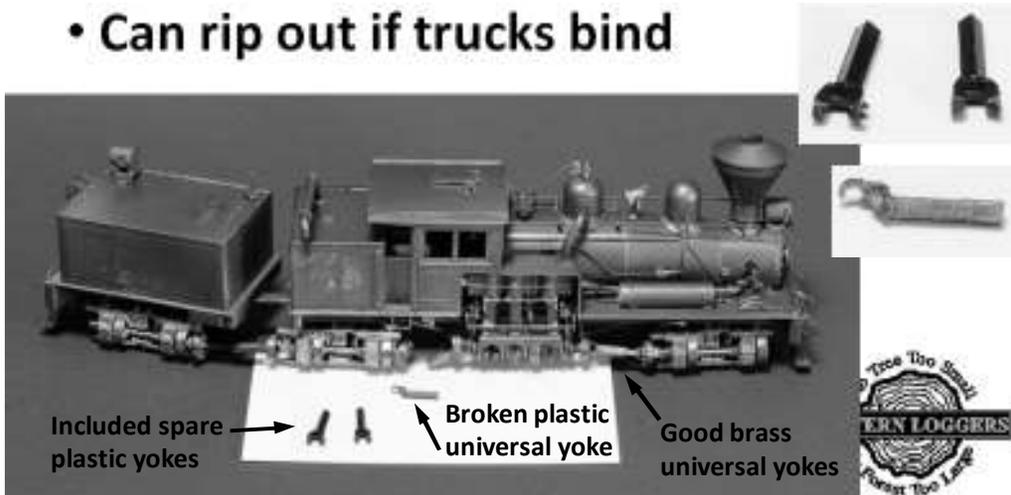


Eventually metal axles wear through plastic truck sideframes



Brass Shays

- Delrin universal yokes = weakest link
- Used to electrically insulate trucks
- Can rip out if trucks bind



Fix Solutions

- Buy replacement plastic parts
 - Individual parts or entire side frames
 - But likely will fail again eventually
- Buy NWSL brass replacement gears
 - Difficult to install on wire line-shafts
- Brass shays have spare plastic yokes
- Doubling hills or double head



Replacement Parts

