

How PT&P Repaired Another OEM's 20,000 lb Constant Spring Hangers in 2 Days During an Active Turbine Outage

When an active turbine outage required immediate action, PT&P repaired and refurbished two constant spring hangers designed to support a 20,000-pound load each, originally manufactured by another OEM.



Emergency repair of two constant spring hangers at PT&P restored and ready for return to service

Background

A major midstream operator experienced the failure of two large constant spring hangers during a planned turbine outage. Each unit was rated at 20,000 lbs load capacity with 27 inches of travel, supporting critical high-load piping where a constant support force must be maintained through the full range of thermal movement.

Constant spring hangers of this size are engineered assemblies. A failure means teardown, component-level repair, recalibration, and load verification before the unit can safely carry pipe again. Most facilities have no spare on the shelf for a 20,000 lb, 27-inch-travel constant; when one fails during an outage, the repair path is the schedule.

PT&P's relationship with this customer dates to a field survey in 2017–18, when PT&P engineers first inspected these units onsite. The first repair was made in 2019. This project marked the fourth repair PT&P has completed on this class of unit for the same customer, a track record built on showing up when the timeline is tightest.



Both units disassembled and inspected at PT&P's Houston facility

The Challenge

The project faced a combination of design, cost, and schedule challenges that prevented forward progress.

- **An Active Outage With a Fixed Window** - The turbine outage was already underway when the hangers failed. Outage schedules are planned months in advance, with contractor crews, crane time, and production restart dates all locked. Every day the supports remained out of service, putting the restart date at risk.
- **A 4-Week OEM Quote** - The original equipment manufacturer quoted a **4-week turnaround** for the repair. During an active outage, a 4-week lead time is not a slower option, it is no option at all. This would be even worse if they had failed while the plant was operating.
- **Large & High-Capacity Engineered Units** - At 20,000 lbs capacity and 27 inches of travel, these are among the larger constant supports in service. Repair demands specialized shop capability: heavy-lift handling, spring and cam expertise, and load test equipment rated for the full capacity of the unit.
- **A Pattern of Repeat Failures** - PT&P has repaired multiple other 20,000 pound constant load spring hangers with the same design at this facility since 2019. Contributing factors to the poor performance of these constant spring hangers including manufacturing defects, excessive load (when one fails the load redistributes to the others), and general wear. The customer needed more than speed, it needed a shop that already knew these units and could restore them with confidence.



Damaged components repaired and both units rebuilt to original specifications

The Solution: A 2-Day Emergency Repair Timeline

PT&P's emergency repair process compresses what is normally a multi-week shop cycle into days. Engineering, disassembly, machining, rebuild, QC, and load testing all happen under one roof at PT&P's Houston facility: no subcontracting, no waiting on outside vendors.

How The Work Unfolded:

Stage	Activity	Timing
First Call	Customer contacts PT&P during the active outage; PT&P commits to an emergency turnaround	Day 0
Receipt & Intake	Both units arrive at PT&P Houston; the job is opened and prioritized for emergency processing	Day 0-1
Disassembly & Inspection	Full teardown; component-level inspection of spring coils, cam, and load-bearing hardware; damage assessment documented	Day 1
Component Repair & Rebuild	Damaged components repaired or replaced; both units rebuilt to original load and travel specifications	Day 1-2
QC & Load Verification	Final assembly and quality control were completed; load and travel verified against the 20,000 lb / 27" rating	Day 2
Shipment	Both units were certified, crated, and shipped back to the customer	Day 2 - Weekend turnaround completed, with both units shipped on Sunday.



Final assembly and load testing completed before release

Why 2 Days Were Possible

- **US Manufacturing and Engineering** - This was only possible because PT&P has over 500 production personnel and 70 design engineers in Houston. We have by far the largest US manufacturing and design facility in the US for Pipe Supports and Expansion Joints.
- **In-house everything** - Engineering, fabrication, machining, spring repair, and load testing at one Houston facility eliminates hand-offs and vendor queues.
- **Subject Matter Expert/OEM-independent repair capability** - PT&P repairs spring supports regardless of original manufacturer, with full engineering accountability and no proprietary restrictions.
- **Prior knowledge of the units** - Having surveyed and repaired these supports since 2017–18, PT&P started work with the unit history already in hand, no learning curve on the customer's clock.
- **A 24x7 emergency process built for outages** - Emergency jobs move to the front of the shop, with dedicated personnel assigned from receipt through shipment.

"We take on the work our competitors won't. It is what sets us apart and keeps the clients coming back."

- David Baker, Sales Manager



Both repaired units are packaged and ready for return shipment

Results

- 2 business days from receipt to shipment, against the OEM's 4-week quote, a 14x faster turnaround
- 2 units repaired and returned within the outage window, protecting the restart schedule
- 20,000 lb capacity and 27 inches of travel, fully restored and load-verified on both units
- 4th successful repair for this customer since 2019
- Zero subcontracting, every step is performed in-house at PT&P Houston
- A relationship spanning nearly a decade, from field survey to onsite visits to repeat emergency repairs

Facing an Emergency or Turnaround Deadline?

PT&P maintains a 24x7 emergency response process for failed pipe supports, spring hangers, and expansion joints, including units originally built by other manufacturers.

Submit an [emergency request](#) or call (713) 731-0030.