

Mobile Compression: Gas turbine provides effective means to evacuate natural gas pipeline

Recover up to 80% of natural gas in the pipeline without venting for maintenance

CHALLENGE

Recover up to 80% of natural gas in the pipeline section without venting

SOLUTION

Connect a 3MW or 3.5MW Gas Turbine Compressor to evacuate and bypass the fuel around a maintenance location

RESULTS

Over 15 years of reliable pulldown operation with a follow-on order

OVERVIEW

The Vericor ASE40 has been deployed for over 35 years in a mobile pull-down compressor trailer owned and operated by a major North American pipeline company and a world leader in the use of mobile compressor technology for natural gas pipeline maintenance.

The ASE40 engine is directly mounted to and cantilevered from a centrifugal compressor on a single drop-down heavy-duty trailer and housed in a sound-attenuated enclosure with a full cast of auxiliary support systems. This mobile trailer is capable of accessing natural gas pipelines in remote areas and in the harshest climates. The trailer is utilized across multiple stations throughout Canada and the United States as a means to evacuate gas out of pipeline segments that are scheduled for maintenance.

The pulldown trailer helps save approximately 70-80 percent of the pipeline's natural gas that otherwise would be released into the atmosphere. Due to the long-term success of the initial trailer design, an additional trailer will be added to the fleet using Vericor's latest industrial turbine, the ASE50B.

The ASE50B provides the next generation of mobile compressor trailers an additional 20% capability in performance over ASE40 and higher torque capability to maximize performance.



North America



The ASE40 gas turbine is compact and versatile. Start time from stop to full power is achievable in under one minute.



CASE STUDY: Pulldown compressor for pipeline evacuation

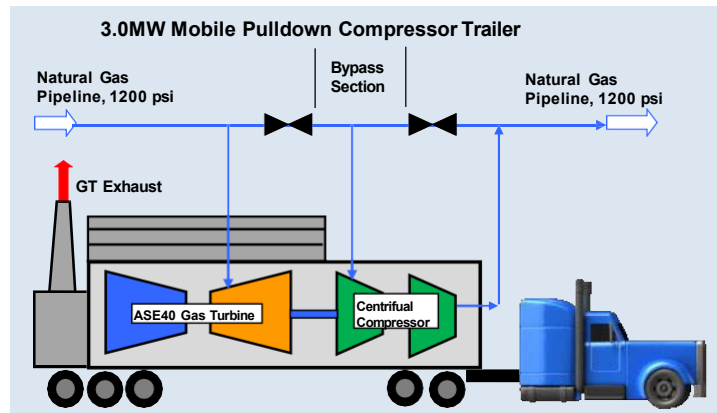


Case Study details and the benefit of an aero-derivative gas turbine

In the late 1970s, the idea of a portable gas compressor was realized when a 3.0MW Vericor ASE40 engine was coupled to a Norwalk TC40 Centrifugal Compressor. This power-packed trailer evacuates pipelines for maintenance by transferring gas downstream to high-pressure pipe sections exceeding pressures of 80 bar.

The compressor is a portable 8-staged centrifugal type with inter and after-coolers for providing high volumetric efficiency. With no need for external electrical connections, the trailer's black start capability is ramped up quickly with an auxiliary power generator to turn the gas turbine starter.

The trailer operates on a standby basis, yielding very low gas turbine maintenance costs that are significantly below that of its reciprocating engine counterpart.



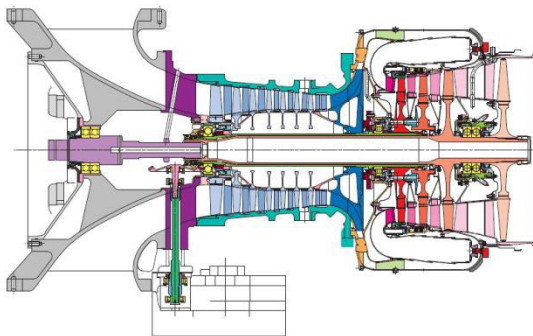
Vericor's ASE gas turbines are a proven aero-derivative design that are specifically configured for power generation and compressor drive applications.

The advantages of using these gas turbine systems for mobile mechanical drive applications are many:

- Compact size allows for easy on-site installation and change-out
- Cantilever mount directly to powered equipment
- High operational readiness
- Fast cold start characteristics
- Low emissions and vibration
- Flexibility to efficiently burn a variety of fuels
- High reliability and low maintenance requirements

The modular nature of these engines allows for easy inspections on-site. This ease-of-care approach simplifies the stocking of spares and lowers downtime and maintenance periods. Recommended maintenance cycles for each ASE gas turbine are 30,000 hours for a hot section overhaul and 60,000 hours for a major overhaul.

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ASE40 Cross Section