

# CASE STUDY

FX-TURBO Evaluation, Repair & Redesign

## Turboexpander-Generator



### Application:

Geothermal Power Generation

### Location:

Nevada, USA

### Challenge:

Undetermined source and excessive leakage of oil into process piping of non-LAT turboexpander-generator unit.

### Specifications:

Inlet Pressure: 455 PSIA

Inlet Temperature: 261° F

Flow Rate: Isobutane 1.6M LB/HR

Power: 11 MW

L.A. Turbine (LAT) is a recognized leader in aftermarket repair, redesign, maintenance and production of spare parts for all LAT & non-OEM turboexpander brands and configurations.

Our global FX-TURBO team provides diagnostic and emergency help 24/7/365 via our +1 855 FX-TURBO hotline (+1 855 398 8726) as well as on-site field service support.

LAT is also an OEM of turboexpanders for hydrocarbon processing, propane dehydrogenation, geothermal power generation and other industrial power recovery and refrigeration applications.

**24/7/365**  
**Support Services**

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## Case Study: Turboexpander-Generator

### Challenge:

Six turboexpander-generator units were experiencing excessive leakage of oil from an undetermined location into the process piping of a non-LAT unit. The seal oil leak rate to the seal oil drain tank was almost 10x the design amount. The leakage required additional and ongoing tank drainage, treatment process handling and plant labor.

### Solution:

LAT's engineering evaluation revealed the need for a new seal design. Leakage levels were controlled following the installation of the newly designed seal replacement part.

### Result:

The new seal design is meeting and exceeding performance levels. Acceptable leakage levels on the process side seal are less than the customer-stipulated requirements and less than the guaranteed supplier leakage values.

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