



Package Refurbishment

Extend the life of your Solar gas turbine to produce more while achieving the latest standards for efficiency, safety and compliance.

Primary Goals	
✓	Safety Enhancement
✓	Operational Efficiency
✓	Emissions Control
✓	Machinery Efficiency
✓	Life Extension
✓	Optimize Productivity
✓	Reliability Enhancement
✓	Installation Efficiency

Your Solar® turbomachinery has delivered steady, reliable performance for many years—but during that time expectations for production volume, ROI, uptime and service life have steadily risen. Oil and gas field conditions have dramatically changed and equipment budgets are under constant pressure. This leaves you with the constant challenge of keeping up with demand and planning for growth while protecting your bottom line.

Package Renewal and Upgrade (PRU) services from Solar offer you the cost-effective answer by bringing your critical turbomachinery systems—or even your entire package—up to new equipment standards that better match your current and future needs.

Benefits

- Equipment updated to latest standards.
- Anticipated life expectancy equivalent to new equipment.
- Advanced control systems improve turbine package operation and protection.
- Compliance with NEC and CENELEC standards, providing CSA and CE certification as required.
- Increased production.
- Improved efficiency and output despite changing fuel, field and load conditions.
- Enhanced reliability through failure mode reduction.
- Maximized productivity of staff with real-time data and diagnostics capabilities.
- Addresses machinery obsolescence.
- Leverages new technology to improve workplace safety.
- Meets country-specific operational requirements and air-quality standards.

Worldwide Turbomachinery Support

Refurbishing to Like-New Condition

Our PRU services are available for a broad range of *Solar* turbine products, including engines and compressor, pump and generator sets. Equipment is dismantled down to the smallest part, inspected, measured, cleaned, rebuilt to the latest standards and thoroughly tested to ensure it meets Solar's benchmarks for excellence. In essence, your equipment is like new again and comes with a new equipment factory warranty.

On-site Refurbishment

Our unique on-site refurbishment service was created for situations where logistics make getting your unit out of country or off a platform difficult.

Exchange Program for Less Downtime

Solar's Refurbishment Center in Mabank, Texas reconditions and enhances a broad range of *Solar* turbomachinery products with the dedication and expertise only available from the OEM. With our program, we can deliver a complete refurbished package that meets your requirements to speed installation, thereby reducing lost productivity without adversely affecting Solar quality and reliability at a very competitive price.

Customer-Owned Package Refurbishment

The customer specifies the scope of work—from limited refurbishment and warranty—to complete turbine package refurbishment that would have similar warranty terms as a new package.

Sale and Lease of Refurbished Gas Turbine Packages

Saturn®, *Centaur*®, *Taurus*™ and *Mars*® gas turbine packages are refurbished and updated to the latest technologies to increase power and efficiency and are customized to meet your requirements.

Many configurations of *Solar* gas turbine packages are also available on a lease basis.

Total Package Refurbishment Options

- Gas turbine overhaul and performance test
- SoLoNOx™ combustion system upgrade
- Driven equipment overhaul or replacement
- Centrifugal gas compressor seal system conversions (wet to dry)
- TurboTronic™ control system
- Component remanufacture or replacement
- Package system upgrades (start, fuel, lube, seal)
- Package and control system testing
- Package enclosure with fire protection system
- Ancillary systems (inlet filter, silencer, exhaust system and oil cooler)

Total Package Refurbishment Process

Disposition

- Detailed unit assessment
- Complete package disassembly
- Component remanufacture or replacement
- Gas turbine overhaul
- Centrifugal gas compressor overhaul
- Gearbox/OEM driven equipment overhaul

Cleaning and Painting

- Paint and surface contaminants removed
- Package surfaces repainted to original high quality standards

Assembly

- Rebuilt or re-configured for new application
- Components assembled with new tubing, hoses, conduit or cable

Testing

- Gas turbine performance
- Static tests of package and control system
- Package and control system dynamic simulation
- Centrifugal compressor mechanical and seal leak
- Air performance test of centrifugal gas compressor (optional)

Documentation

- Complete set of drawings (electrical, hydro-mechanical and mechanical installation)
- Full set of Operation and Maintenance Instruction (OMI) manuals
- Illustrated parts list
- Updated supplementary data available on CD-ROM

Additional Information

For more information about Solar's refurbishment capabilities contact:

Solar Turbines Incorporated
Mabank Refurbishment Center
904 Solar Turbines Way,
Highway 90
Mabank, TX 75147

Phone: (903) 880-1200

You can also contact Solar's Field Office nearest you or visit us at www.solarturbines.com