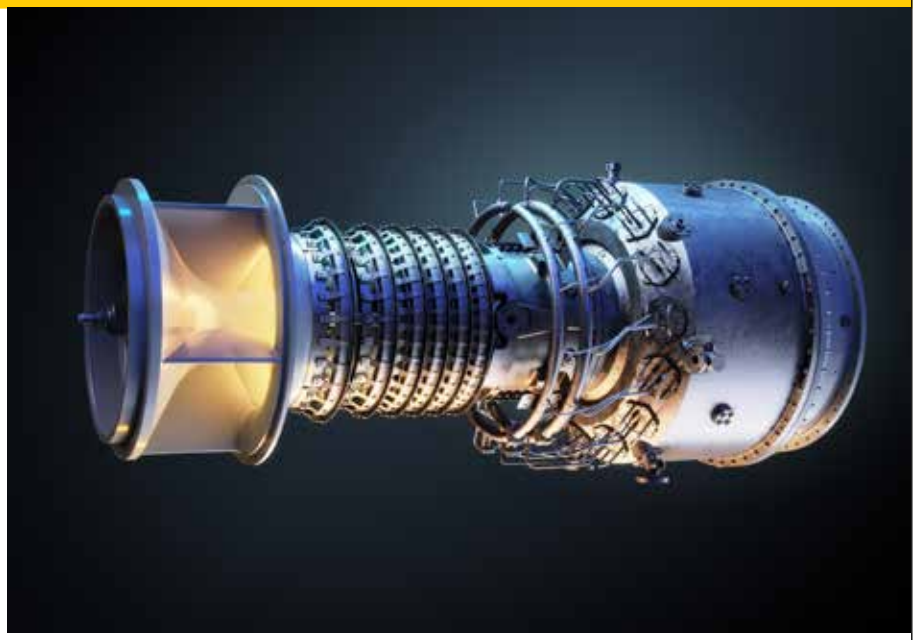
Solar® Turbines

A Caterpillar Company

Powering the Future Through Sustainable, Innovative Energy Solutions



Field Repair Capability

As Solar® gas turbines increase in size, complexity and horsepower, in-field serviceability is developing into an integral design element—enabling us to minimize downtime while saving our customers significant time and repair expense.

In response to customers' growing needs for greater productivity, Solar has developed higher horsepower turbomachinery. And to assist our customers in keeping their Solar equipment operating, we've developed a team of experts and tooling that enables us to repair many of those units in the field.

Benefits

Faster Response: By staging tooling and personnel at strategic centers worldwide, we can quickly be at a customer's equipment site, often within a matter of hours.

Fewer Delays: Customs issues in some geographic areas can generate costly time penalties when it comes to getting repair equipment, parts and manpower into the country. By pre-positioning the necessary tools, materials and personnel within those regions ahead of time, such delays can be greatly reduced.

Increased Cost Savings: When a Solar gas turbine is repaired in place, it can be returned to production in a timely manner, leading to significant savings. Plus, the expense of gas turbine removal, shipping and re-installation are eliminated.

As an added convenience for customers, Solar's field repair specialists, along with our field service staff, can handle equipment shutdown, repair, restart and performance testing – ensuring that your Solar turbomachinery is operating properly.

Increasing In-Field Repair Capabilities Worldwide

As Solar gas turbines are installed in more locations worldwide, we're expanding the quantities and types of repair tooling we have staged at strategic points around the globe to stay abreast with that growth. In addition, we're adding more manpower and upsizing our field repairs portfolio to provide even faster, more efficient service on a broader scope of complex equipment repairs.

Advancements in Field Repair

It is a law of turbomachinery physics that any sizeable increase in output power must be accompanied by a significantly larger gas turbine. In order to maintain important in-field serviceability, Solar's newest, largest and most powerful gas turbine, the Titan™ 250, features a breakthrough axial rail system that enables the unit to be split into modules. This gives you the flexibility to conduct comprehensive in-place field repairs or major component exchange without the time-consuming expense of removing the engine from its enclosure. Your Solar gas turbine can remain in position, yet still receive the high level of quality service required. The end results are greater availability and productivity, and less downtime to adversely affect your bottom line.

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Field Repair Capability	Centaur® 40	Centaur 50	Mercury™ 50	Taurus™ 60	Taurus 65	Taurus 70	Mars® 90/100	Titan™ 130	Titan 250
Reduction Gearbox	•	•	•	•	•	•	•	•	•
Accessory Gearbox	•	•		•		•	•	•	•
Air Inlet CED #1 Bearing									
#1 Radial Bearing	•	•		•	•	•	•	•	•
#1 Thrust Bearing					•	•	•	•	•
#1 RTD					•	•	•	•	•
#1 Prox Probe/Axial Probe		•		•	•	•	•	•	•
#1 Bearing Housing and Seal	•	•		•		•	•	•	•
#1 Bearing Trim Balance				•	•	•	•	•	•
Air Inlet HED #1 Bearing									
#1 Radial Bearing	•	•		•		•	•	•	•
#1 Thrust Bearing						•	•	•	•
#1 RTD						•	•	•	•
#1 Prox Probe/Axial Probe		•		•		•	•	•	•
#1 Bearing Housing and Seal	•	•		•		•	•	•	•
#1 Bearing Trim Balance		•		•		•	•	•	•
Compressor Section									
Foreign Object Damage		•		•	•	•	•	•	•
Blade Retrofits							•	•	•
Stator Retrofits		•		•	•	•	•	•	•
Guide Vanes and Bushings		•		•	•	•	•	•	•
#2 / #3 Bearing Trim Balance			•	•	•	•	•	•	•
#2 Bearing and Seal						•		•	•
Manual Compressor Clean		•		•	•	•	•	•	
Gas Producer Hot Section									
Combustor Assembly	•	•	•	•	•	•	•	•	•
Diaphragm/Preswirler	•	•	•	•	•	•	•	•	•
1st Stage Nozzle	•	•	•	•	•	•	•	•	•
2nd Stage Nozzle	•	•	•	•	•	•	•	•	•
3rd Stage Nozzle	•	•		•	•	•	•	•	•
1st Stage Blade	•	•	•	•	•	•	•	•	•
2nd Stage Blade	•	•	•	•	•	•	•	•	•
3rd Stage Blade	•	•		•	•	•	•	•	•
#3 Bearing	•	•		•	•	•	•	•	•
#3 Prox Probe		•		•	•	•	•	•	•
Power Turbine Section									
3rd Stage Nozzle	•	•		•		•	•	•	•
4th Stage Nozzle	•	•		•		•	•	•	•
3rd Stage Blade	•	•		•		•	•	•	•
4th Stage Blade	•	•		•		•	•	•	•
#4 Bearing	•	•		•		•	•	•	•
#5 Bearing	•	•		•		•	•	•	•
#4 / #5 Prox Probe		•		•		•	•	•	•
#5 Axial Probe		•		•		•	•	•	•

Additional Information:

Internet: **www.solarturbines.com**
Email: **infocorp@solarturbines.com** Phone: **+1-6719-544-5352**