

When You Think ISP Think PSI

Wind Energy Component Life Cycle Solutions



ISO 9001:2008
CAGE 5N884
SDV0SB

psi-repair.com



PSI REPAIR SERVICES, INC.



Electronic Repairs

Printed circuit boards
PLC
Thyristors
MET boards
SCADA
Pitch controls
Monitors and displays
VRCC units
Anemometers
IGBT banks
Power converters

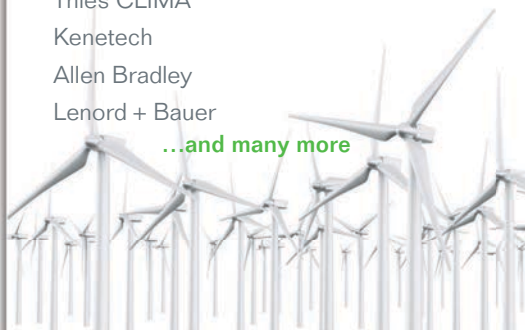
Component Repairs

Hydraulic actuators
Hydraulic pumps
Proportional valves
Pitch motors
Encoders
Gear Boxes- light duty
Transducers

Manufacturers

Vestas® Wind Systems
GE Energy
Zond
Neg Micon®
Siemens
Cotas
Mitsubishi
Second Wind
Vickers®
Balluff
Nordtank
Thies CLIMA
Kenetech
Allen Bradley
Lenord + Bauer

...and many more



Call us! The experts at PSI Repair Services are ready to help when your warranty runs out.

You are in charge of keeping things turning, and PSI Repair Services, Inc. has your back. PSI Repair Services is your go-to source for out-of-warranty wind turbine components. We offer fast, affordable repairs, as well as upgraded, longer life products, for the electronic, hydraulic and precision mechanical components that drive your wind turbines' pitch and yaw systems and down tower electronics.

PSI has more than 40 years experience in repair and uses cutting edge diagnostic tools to detect failures down to the microchip level. PSI can even detect which components are likely to fail in the near future and return your components to optimal working condition. Count on PSI to diagnosis, fix and test your critical wind energy components.

Bringing cost savings to your O&M budget

PSI's innovations in engineering brings your critical parts back to life at a fraction of the cost to replace. You can decrease maintenance costs 30-70% by repairing versus replacing. Call us today at **800.325.4774** and experience the **PSI Repair Services Advantage:**

- ✔ Optimize your legacy equipment by having PSI remanufacture your obsolete components back to peak performance
- ✔ Minimize downtime—quick turnaround and surplus parts availability
- ✔ Receive personalized account management
- ✔ Free evaluations

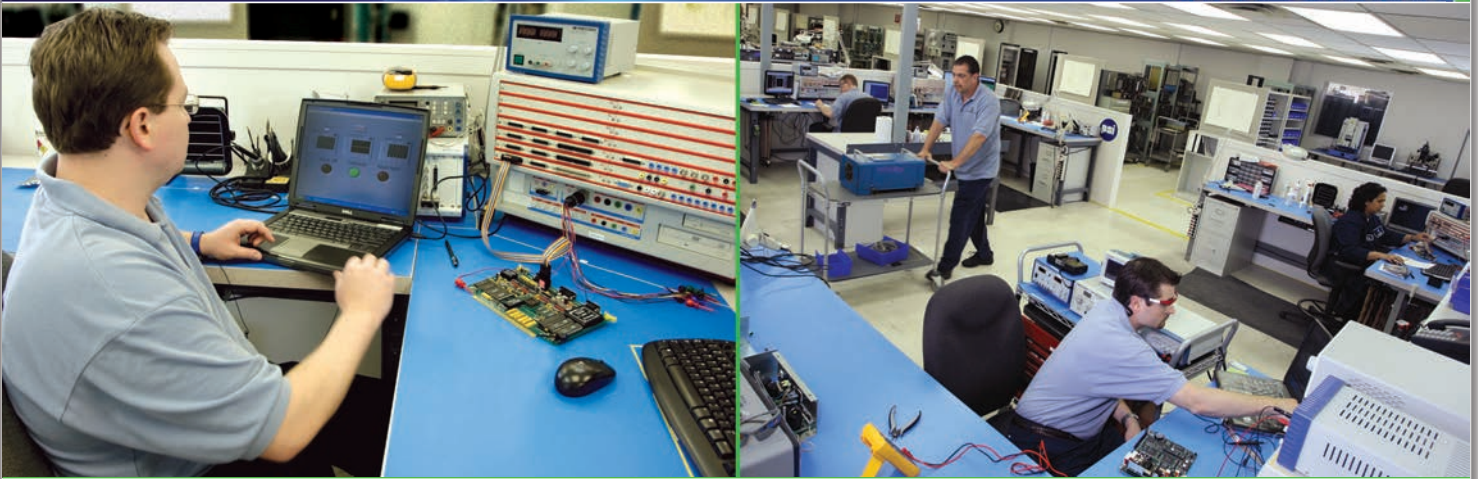
Industry leading service and repair capabilities:

- ✔ Advanced diagnostics
- ✔ Emergency service
- ✔ Failure analysis
- ✔ Product enhancement
- ✔ Technical engineering
- ✔ Reverse engineering
- ✔ Schematic engineering
- ✔ Preventive maintenance
- ✔ IC chip programming
- ✔ Board manufacturing



79% of wind turbines are set to move out of warranty in less than five years.

October 2010 iNews Connect article by Gillian Moore



PSI Repair Services, Inc. has 56,500 square feet of repair space, a portion of which is dedicated to GE Hub Converter repair.

PSI Repairs what others cannot

Have you every been told that your critical component is unsalvageable? It might not be. PSI Repair Services repairs or remanufacturers what others cannot. The PSI Engineering Services Department completes a thorough root cause analysis and determines the corrective action necessary. PSI can engineer a custom solution to repair the existing failure and prevent future ones. Learn more about our innovative capabilities below.

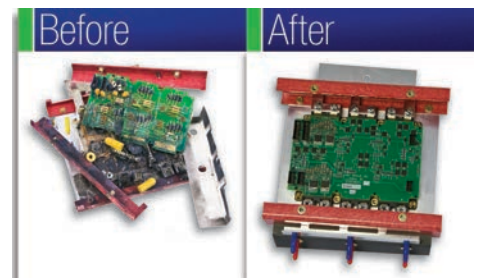
GE Hub Converters

PSI's time-tested repair capabilities for GE Power Converters can save you over 60% versus the cost of buying new. Plus, our exclusive product enhancements allow your converter to run cooler and include upgraded capacitors, which will extend its life. In cases of catastrophic failure, **PSI can manufacture new bus boards to increase the successful salvage rate to 100%**. To date, we have saved our customers over hundreds of thousands of dollars on GE Power Converter repairs.



GE IGBTs

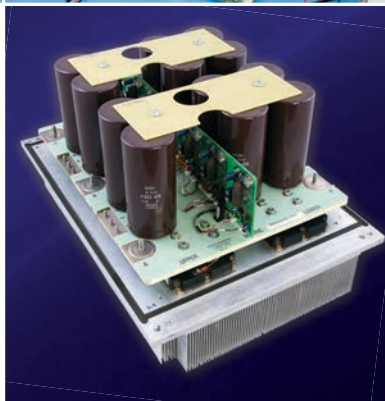
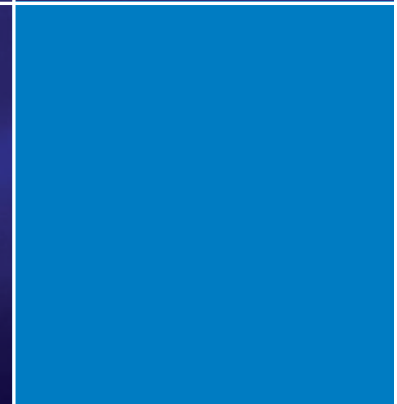
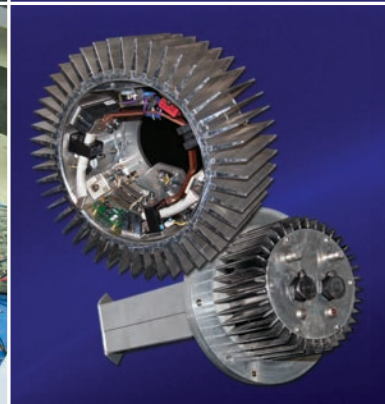
PSI can repair or replace every possible failed part within a GE IGBT. This includes the IGBT itself, AEBM cards, bus bars, insulators, cables and more. We can even provide custom reusable packaging. What was once not repairable – now is, and you save money.



LENORD + BAUER PITCH CONTROLS

The Lenord + Bauer pitch control is an extremely complex piece of electronics. PSI has developed a proprietary procedure that tests all I/O and simulates closed loop communication with pitch motors. We can even replace damaged/degraded displays and keyboard overlays. If you are in the warmer climates, **PSI can upgrade your pitch control to a 70 degree C rating.**





PSI REPAIR SERVICES, INC.

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