



# Generator Stator Dovetail Wedge Shimming

## Loose Stator Wedges

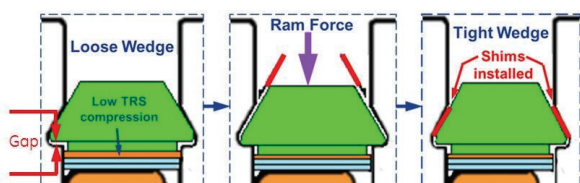
### Applications

Routine inspection of in-service units can result in the discovery of loose stator slot wedges which require partial or full re-wedging of the unit.

Loose wedges have been attributed to relative movement between the core laminations, side ripple springs, and stator bars. In some cases, the magnitude and frequency of this relative motion has led to moderate dusting/greasing, and has also been associated with bar abrasion.

Until recently, re-wedging was the only way to correct this condition. Re-wedging is an effective method however it is time consuming, typically entails replacing many more wedges than necessary (to tighten wedges in the middle of the core and time waiting for parts.

In order to improve the cycle of this process, GE has developed an in-situ wedge tightening process that **nearly eliminates material lead times and cuts the overall cycle time.**



Wedge Shimming Procedure

Shimming process is currently available for tightening body wedges **for any generator that uses the standard piggy back wedge system with top ripple spring.**

Shim process applies only to body wedges. End wedges require replacement.

Shim process requires the generator rotor be removed.

### Features & Benefits

Non-invasive, non-destructive process for tightening loose stator body wedges.

"Targeted Tightening" - Tighten only loose wedges (possibly their adjacent wedges) without disturbing existing tight wedges.

**Cycle time reduction up to 50%** compared to full re-wedge.

Number of parts required **greatly reduces procurement costs and lead time.**

No removal of some wedges reduces risk of damage to generator.

Re-using existing wedges reduces creep and relaxation associated with new wedges.

### Test Validation

Extensive material testing on shimming and stator slot components.

**Full scale trial** completed in a 7A6 stator.

**First unit implementation May 2016**