

## Spring Replacement – 2005 and earlier LAKOTA S & SC

FERNDALE RENEWABLE ENERGY EVALUATION (F.R.E.E.)

WIND TEST CENTER

## **TECHNICAL BULLETIN 006**

## REPLACEMENT SPRINGS

Early LAKOTAs made prior to 2006 had standard coil springs but in early 2005 some were shipped with springs that were about 18-22% stronger than specification. You can identify these "too-strong" springs because the loops at either end are off-set by 90 degrees instead of being "in-line". These springs should not be used, especially in high wind sites. The stronger springs tend make the turbine furl late in high winds and can shortening the life of your turbine. Also, the softer spring material was prone to breaking off at the upper spring hook or loop. Both spring and upper stud should be replaced with an available kit as soon as practical.

The older stainless upper spring stud attachments sometimes had sharp edges that would chew through the softer spring material and break the upper loop of the spring if high frequency vibrations are present due to extreme wind and poor blade balancing. This is most noticeable if your blade tips are not mounted exactly equidistant when you installed them.

Any 2006 and newer model LAKOTAs use an entirely new and different spring attachment mechanism and do not require this upgrade.

## **REFER TO PHOTO AT RIGHT**

The spring and attachment on the left is the older design and BOTH sides should be replaced as shown on the right. The spring loops should go through the stud loops from back to front as shown.

Make sure the new upper stud goes almost all the way IN and the lower stud is all the way OUT. The spring should be snug but NOT EXTENDED. The UPPER LEFT stud on some castings may require you to file a notch to allow the stud to go fully IN.

Contact your Dealer/Installer or TRUE-NORTH Power Systems service support at david@truenorthpower.com (519) 793-3290 for assistance.





Copyright (C) 2006 TRUE-NORTH Power Systems