



- There are 12 bolts in total, cost: \$1900/ bolt
- Shaft: 42' long and weighs 20,000 lbs 16" in diameter with 5" bore
- Bolt tightening torque: 9800Ft Lbs (done by the Hytorc a hydraulic torque wrench)
- Material: Stainless Steel (not sure metallurgy)
- Use: To hold the variable pitch hub onto the shaft
- Life span: Bolts are a one-time use because the threads are stretched due to the extreme torque and are not reused. Coast Guard mandates a 5 year overhaul when the hub must be removed from the shaft. So every 5 years they must be replaced.
- Bolt Neck (the step on the shank) is used for alignment purposes to keep hub positioned on shaft
- Hub: Variable pitch hub made by Rolls Royce, weighs 10,000 lbs and supports 4 blades that are 4 feet tall and weigh 1500 lbs.

*from Gabe Martin, November 3, 2014*