

Date: March 5, 2014

**All Talon owners and Exec owners that have a tail rotor drive shaft conversion.**

**Mandatory Compliance Bulletin M27-A  
(Spline Shafts manufactured prior to April 2012)**

**THIS BULLETIN IS MANDATORY.  
ALL OWNERS MUST COMPLY WITH THIS BULLETIN.**

**HISTORY:** Recently an incident occurred to a RotorWay Talon with the shaft driven tail rotor. On start of the initial run ups, the helicopter's tail rotor rpm was found to be running at a slower speed than normal. Upon inspection, one of the two steel splined shaft weldments (E18-4200) in the center of the shaft was found to have a broken weld. Each spline has one weld located at the inside edge of the spline's teeth.

**INVESTIGATION:** A sample of splines from our inventory and from this helicopter was sent to an independent lab for analysis of both the welds and the current welding procedure. Hardness, cross-section, optical micro and sem/eds testing were completed on the shafts. It has been determined that the break in the spline shaft weld (E18-4200) was due to lack of pre-heat prior to welding the components resulting in a lack of penetration between the spline and the spline shaft.

**ACTION:** Due to the seriousness of the potential danger involved with a loss of tail rotor authority, this bulletin requires the replacement of the spline shafts manufactured prior to April of 2012 in all RotorWay helicopters with a shaft driven tail rotor. Spline shafts manufactured April of 2012 and forward have been pre-heated before welding.

Spline shafts covered in this bulletin are to be removed from the helicopter and returned to RotorWay International for replacement. RotorWay International will provide a replacement spline shaft weldment kit at no cost (except shipping) to the owners of the aircraft that are affected by this bulletin. Replacement kits will be available as of March 10, 2014. Please contact our parts department to place your order.

**Spline Shaft Weldment Kit:**

- (2) E18-4200 – Spline Shaft Weldment
- (4) E00-2407 – Bolt AN4-13A (1/4 x 1 3/8)
- (8) E00-4401 – Regular Washer AN960-416 (1/4)
- (4) E00-3402 – Nut AN365-428A

