# IMPROVED WING PIN REMOVAL AT NASNI NADEP ELIMINATES HAND-ARM VIBRATION HAZARD

Wing pin removal from the F/A-18 aircraft can be difficult if the pin is corroded. In the past, employees at Naval Air Station North Island (NASNI) Naval Aviation Depot (NADEP) used a 9X rivet gun to remove wing pins. The procedure usually took eight hours, but it could take several days to remove a corroded pin.

In order to remove a wing pin, the employee had to hold the rivet gun in both hands and lean into it to increase the force exerted on the pin. Vibrations from the rivet gun translated to the employee's torso, wrist, and arms, introducing occupational health risk factors. A NASNI mechanic was tasked with researching and developing a safer, more efficient method of removing wing pins.

**Old method of removing wing pin**

**Remote control method of removing wing pin**

Mr. Xavier Mercado, one of the employees who regularly performed wing pin removals, invented a system for strapping the 9X rivet gun in place and operating the gun with a remote control trigger. Mr. Mercado's invention was approved by the NASNI mechanical engineer in charge and has been implemented with great success.

The new method of wing pin removal not only eliminates worker exposures to vibration, it also saves the Command time and money. Time saved was calculated at 20 hours per unit, with approximately 70 units processed in a year. This represents an annual cost savings of $29,669.00.