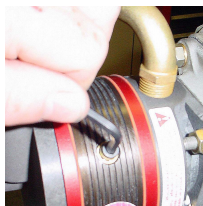


S.M.A.R.T.

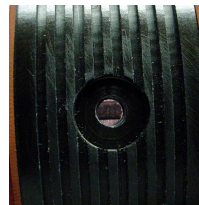
Simple Monitoring At Regular Times

STICK

A dry air pump's life span depends on many factors such as: accessory drive shaft ratios, cooling of the pump, and vacuum system maintenance. Rapco, Inc. has developed a way to easily determine if a pump has reached its useful life span and should be replaced or continue in service. The SMART Stick is a dip stick, go-no go, gauge that is included with all new 200 and 400 series vacuum pumps. Rapco's inspection port is conveniently located at the top of the pump for easy access. In most installations there is no need to remove the pump for inspection. First pump inspection is due after 500 hours of operation, and at each annual thereafter. The simple inspection procedure is as follows:

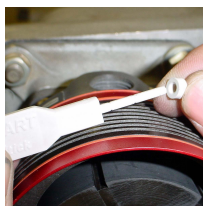


1. Removed the cap screw toward top center portion of pump with a 5/32 Allen wrench to open inspection port.

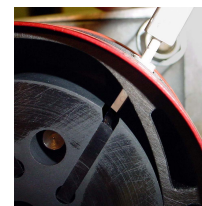


2. Make sure magnetos are grounded and off. While looking in the inspection port with a flashlight, have the prop turned backwards to align the vane slot in the carbon rotor with the inspection port. Always use extreme caution when moving the propeller.

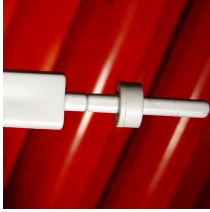
(If the pump is removed from the aircraft, simply use the drive to manually move the pump)



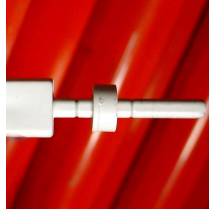
3. Remove the collar that is attached to the handle of the SMART Stick and place on the shaft near the end away from the handle. Place the Stick into the inspection port.



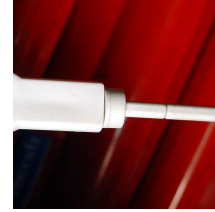
Proper installs



A. If the line furthest from the handle is not visible, the Stick is installed incorrectly, Re-Align the vane slot with the inspection port and re-insert.



B. If the bottom of the collar is between the two lines on the shaft of the Stick, the carbon vanes have additional life.



C. If the top of the collar touches the handle of the Stick, the pump is at wear limits and should be replaced.

4. Reinstall socket cap screw, ensuring that the lock washer is in place, and torque to 14 pounds-inch.

Before returning to service, be sure to clean and inspect the balance of the system. Replace the central air filter and the regulator filter.