

**COMPRESSOR BLADE WASH - MAINTENANCE PRACTICES****1. General**

- A. Compressor blade wash is accomplished to remove deposit buildup accumulated on compressor blades during normal operation.

**2. Engine Motoring Wash**

**NOTE:** Refer to Pratt and Whitney Engine Maintenance Manual for more information about the engine compressor wash procedures, wash schedules, and cleaning solution mixture. These documents recommend the use of demineralized water for motoring washes, and recommend drinking-quality water as an alternative. The Pratt and Whitney Engine Maintenance Manual gives specified information about drinking-quality water and demineralized water.

**NOTE:** The engine shall be washed by the following method (motoring wash only) using the starter. Cleaning solution flow rate should be 2-3 GPM.

**CAUTION:** Observe starter cycle limitations outlined in the pilot's operating handbook and faa approved airplane flight manual to prevent damage to the starter/generator when motoring engine.

A. Desalination or Performance Recovery Wash.

**NOTE:** Removal and capping off of P3 pneumatic lines, during compressor blade wash is not necessary on airplanes utilizing the newer Pratt and Whitney engine PT6A-114A. This change is due to the incorporation of an improved P3 air filter drain adapter, which eliminates the possibility of fuel contamination and damage to the P3 lines due to mishandling, during this maintenance procedure.

- (1) Open upper left cowling door and connect wash ring, refer to Pratt and Whitney Engine Maintenance Manual.
- (2) Place suitable catch pan under engine.
- (3) Open right upper cowling door.
- (4) Disconnect the flexible hose from the heater diverter air valve and move hose away from valve.
- (5) Disconnect compressor duct from the flow control valve tee and move the duct away from tee, refer to Chapter 21, Compressor Bleed Air Heater - Maintenance Practices.
- (6) Locate and remove the P3 line from the engine to the P3 filter assembly. Cap the open port at the P3 filter assembly (this step applies only to the older engine configuration).
- (7) Ensure ignition and airplane bleed air is OFF.
- (8) Perform the desalination or performance recovery wash, refer to the Pratt and Whitney Engine Maintenance Manual.
- (9) Reconnect hose to heater diverter air valve.
- (10) Reconnect the compressor duct at the flow control valve and secure, refer to Chapter 21, Compressor Bleed Air Heater - Maintenance Practices
- (11) Remove the cap at the P3 filter assembly and reconnect the P3 line from the engine to the P3 filter assembly (this step applies only to the older engine configuration).
- (12) Start engine and run at 80 percent  $N_g$  for one minute to dry engine.
- (13) Shut down engine and close upper cowling doors.