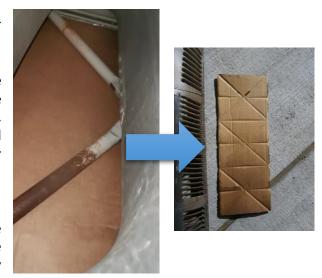


Potential Error of Pre-cooler Installation

On February 8th, 2020, during troubleshooting of Engine #1 bleed air fault at Sta. MCT found precooler inlet was blocked by cardboard packaging that was not removed during installation.

Based on investigation, there were several contributing factor that impact on human factor during maintenance, that is:

- ✓ Time Pressure
 - Due to bleed system problem, the rectification process need more time while the replacement parts arrived very late. Therefore, the maintenance crew perceived pressure during maintenance to avoid further delay and operation disruption.
- ✓ Supervision
 Engineer as a supervisor did not fully ensure
 the inspection process to detect the
 cardboard before installation of precooler by
 Technician.



✓ Lighting

Pre-cooler replacement was performed at night outside hangar where the illumination was insufficient.

To avoid these occurrence happen, here are some tips that might to be followed during maintenance:

Be Prepared!

 Supervisor shall ensure preparation before installation process (tools & equipment, part / component, access, manpower) are available and meet the requirement of aircraft maintenance manual.

Identified!

• Perform General Visual Inspection before installation of the part, ensure the part was identified completely and free from unwanted material.

Stay Focus!

• Do carefully step-by-step task of maintenance to deal with time pressure, ask colleague to manage rush during maintenance.

Good Lighting!

 Use proper illumination when it is dark condition, do not continue the work after there are sufficient light available.

