

## Electro-environmental: Charging the mission

By Senior Airman Lisa Krebs  
48th Fighter Wing public affairs

Electricity and our environment: it's around us constantly. Electricity lights up our houses and workplaces, turns on our computers and televisions and can sometimes be seen in the night sky, a piercing, crackling vision of bright white light. The environment gives us the air to breathe and a medium in which to fly our fighters.

Without electricity and an environment where air is controlled and pumped into a variety of systems, the jets are nothing but steel sculptures sitting in a museum. It takes electricity to transform RAF Lakenheath jets into the maintainers of air superiority they are, and it takes the 48th Component Repair Squadron electro-environmental technicians to control the environment and to ensure the energy keeps flowing.

On the flightline, electro-environmental technicians troubleshoot problems encountered on the jets. They replace faulty parts and maintain the jets' electrical and environmental systems. The faulty parts taken out of the aircraft by flightline electricians are brought to the electro-environmental backshop to be repaired.

Some parts that may end up in backshop include refueling and position lighting assemblies, avionics relay panels, throttle quadrants, generators,

and constant speed drives.

"The generator and CSD are what make up the integrated drive generator. Two IDG's supply electrical power to the entire aircraft," explained Staff Sgt. Richard Ebhardt, electro-environmental section shift supervisor. "We also work just about any cable you could find in the F-15."

All of the wing's cryogenic equipment is maintained by electro-environmental as well, including liquid and gaseous oxygen carts and liquid nitrogen carts. The cryogenic carts require periodic inspections to be completed in certain intervals during the year. Performing scheduled inspections are a mainstay of the shop.

Other environmental equipment that comes into the backshop include the bail-out bottles the shop services and inspects that provide oxygen when a pilot ejects from the aircraft, as well as the liquid oxygen converters that the aircrew use to breathe. Anything that uses air falls into their repair or inspection capabilities.

The backshop also is responsible for conducting a portion of the aircraft phase inspections, which occur at 200 flying hours, 400 flying hours and 1200 flying hours. As more hours are logged on a jet, wear and tear of individual systems increase. Electro-environmental technicians repair wire bundles, replace filters and valves, and do inspections on their particular areas of the jet. The backshop also performs time-

compliance technical orders or TCTOs. The shop has a certain number of days to comply with TCTOs, and these could be components or systems that need upgrading or contain a safety fault.

"We're always a backup for the flightline. We'll always assist in other areas where we may potentially be involved in for troubleshooting or repairs," Ebhardt said. "During the phases, there's usually one aircraft from every squadron in the hangar at a time. We can have three or four jets in at once that need phase inspections done."

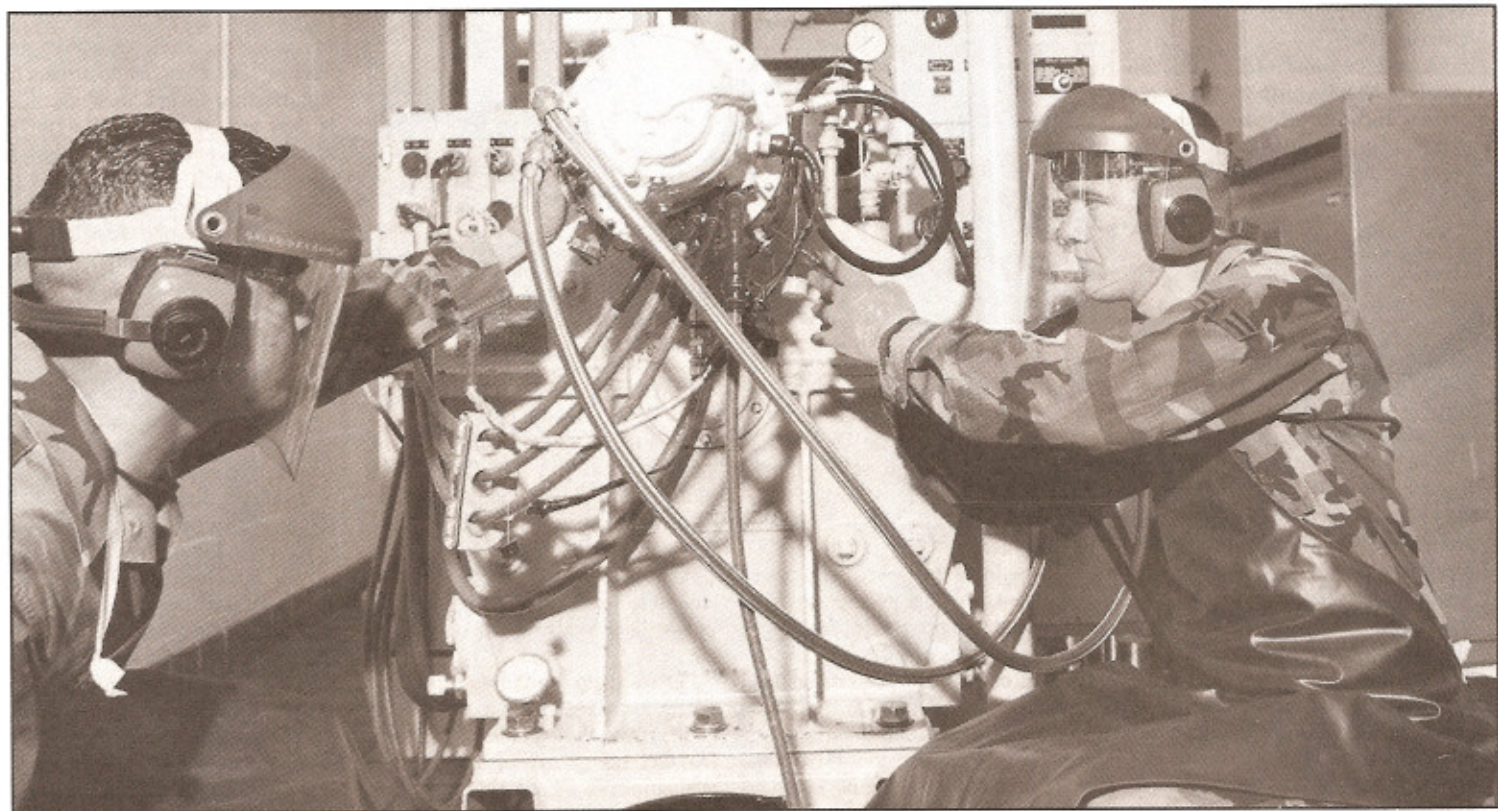
According to Ebhardt, only the electro-environmental technicians are

allowed to remove their equipment, and sometimes the technicians will go out to the flightline to offer consultation to crew chiefs and other maintenance technicians trying to troubleshoot problems on the aircraft, whether or not the electrical or environmental part is at fault. Sometimes, another shop needs electro-environmental to remove equipment so they can repair their equipment.

"There's a lot of variety in this job - it's one of the most diverse fields in aircraft maintenance," explained Ebhardt. "We work on fuel tanks, throttles, relay panels, wire harnesses... we work wingtip to wingtip, nose to tail."



Senior Airman Charles Chambers and Staff Sgt. Richard Ebhardt solder a switch to a weapons controller.



Photos by Senior Airman Tony Tolley

Airman 1st Class Charlie Stevens and Airman 1st Class Christopher Jackson adjust the frequency on an F-15C constant speed drive.