

Appendix E

Safety

An effective safety program for maintenance operations is a basic requirement in all Army aviation units. Everyone in the unit must constantly be alert to recognize and correct potentially dangerous safety hazards immediately. All personnel must understand the hazards of working around aircraft and know the other safety principles discussed here.

ACCIDENT CAUSES

E-1. An aviation accident is seldom caused by a single factor such as human error or materiel failure. Accidents are more likely to result from a series of incidents. This fact must be recognized in developing an aviation accident prevention program. The following areas require constant command attention to prevent aviation accidents:

- Human factors.
- Training education, and promotion.
- Equipment design, adequacy, and supply.
- Normal and emergency procedures.
- Maintenance.
- Facilities and services.
- Environment.

E-2. The USASC has found that human error accounts for approximately 80 percent of total mishaps. Maintenance-related mishaps do account for a percentage of total mishaps. As expected, more complex aircraft have higher maintenance mishap rates. At unit level, commanders and maintenance supervisors must ensure that their personnel know of maintenance errors generated in their own units. They can be made aware of those in other units by examples found in Flightfax and other publications. All maintenance activities and personnel must strictly adhere to published maintenance procedures and apply risk management/risk assessment at all levels of operations.

SAFETY REGULATIONS

E-3. AR 385-10 regulates overall safety. One important aspect of this regulation is that it integrates Occupational Safety and Health Act requirements into the Army Safety Program. AR 385-95 regulates the Army Aviation Accident Prevention Program. DA Pam 385-40 covers accident investigation and reporting. Personnel who have key responsibilities in the unit's aviation accident prevention program are the commander, the safety officer, all aviators, the flight surgeon, and the unit safety NCO. A complete knowledge of aviation personnel, materiel, and operations is necessary to establish and maintain an effective aviation accident prevention plan. The plan must be tailored to the mission and requirements of the command. All activities that affect aviation operations must be considered.

RESPONSIBILITIES

E-4. Accidents and injuries can seriously reduce the unit's ability to complete its required mission. The unit commander must ensure that all personnel know proper operation and safety-associated procedures for all aircraft, vehicles, equipment, tools, and machinery. Soldiers are responsible for protecting equipment and the lives of fellow soldiers. Therefore, they must actively participate in safety programs. The primary responsibility for safety for all maintenance work performed on the aircraft or on its components rests with the QC section.

UNIT COMMANDER

E-5. Unit commanders are responsible for ensuring that all activities of their units are conducted according to established safety rules and regulations. These regulations include ARs 385-40 and 385-95, DA Pam 385-40, and other required local directives. Unit commanders are also responsible for determining the cause of accidents and for making certain that corrections are made to prevent their recurrence. They must be aware of, and enforce, all safety regulations established by higher headquarters. When a deviation from an established safety rule is desired, unit commanders are responsible for requesting permission to do this. This request, including full particulars and detailed plans and specifications, is submitted to the appropriate headquarters. However, unit commanders cannot rely on the safety programs of higher headquarters to ensure the safety of their people. They must also establish their own programs and become personally involved in implementing them.

SUPERVISOR

E-6. Effective supervision is the key to accident prevention. In their daily contact with soldiers, supervisors are in a position personally to observe working conditions and hazards. Supervisors must apply all established accident prevention measures in daily operations. They should conduct meetings with their subordinates frequently at regular intervals to brief them on safety procedures, to get their suggestions on improving safety practices, and to announce any new safety procedures. Such meetings should be held in the work area. The agenda should include the following:

- The overall job and the results expected.
- The how, why, and when of the job and any ideas from the group on ways to improve methods and procedures.
- The part each person will play. Supervisors must ensure that all personnel understand the significance of individual roles.
- Existing and anticipated hazards and the action needed to resolve these problems.
- The need for prompt, accurate reporting of all injuries, accidents, or near accidents, and the importance of first aid when required.
- The need to search constantly for, detect, and correct unsafe practices and conditions to prevent accidents and injuries.

INDIVIDUAL

E-7. All personnel must be aware of the safety rules established for their individual and collective protection. Each person is responsible for reading and following all unit SOPs, instructions, operating procedures, checklists, and other safety-related data. Personnel must then apply all cautions and safeguards in their everyday work areas. Soldiers are

responsible for bringing to their supervisor's attention safety voids, hazards, and unsafe or incomplete procedures. Each soldier must follow through until the problem is corrected, then cooperate in developing and practicing safe working habits. The unit commander should make certain that this spirit of cooperation prevails throughout the unit.

SHOP SAFETY

E-8. A shop that is below standard cannot put out quality work. Therefore, the TI conducts an informal inspection of the various shops periodically and brings any deficiencies or safety hazards to the attention of the shop supervisor. A file of all safety inspections is kept in the QC section and a file copy is kept in the subject area inspected.

E-9. The USASC publication, Guide to Aviation Resources Management for Aircraft Mishap Prevention, is one publication that outlines safety procedures. ARMS Commander's Guide is available at the following worldwide web address: <http://www.forscom.army.mil/avn/>. It has guidance on inspection requirements of the TI. Copies of the guide may be obtained from the unit safety officer. Minor changes to the guide appear in the USASC publication, Flightfax, which is distributed monthly to all aviation units. Other publications outlining specific safety precautions are FM 4-20.12(10-67-1) and TM 1-1500-204-23 series. The following safety questions should be considered by the TI during inspection.

- Aircraft operations.
 - Have pilots checked status of DA Forms 2408-13 and 2408-14-1? (Refer to DA Pam 738-751.)
 - Are fuel sample bottles available and convenient for use in preflight? Are fuel sample bottles stored properly? (Refer to FM 4-20.12[10-67-1].)
 - Is smoking allowed within 50 feet of the aircraft? (Refer to AR 95-1.)
 - Are flashlights available for night preflight? (Refer to AR 95-1.)
 - Are flight and ground crews familiar with fuel servicing and defueling operations? (Refer to TM 1-1500-204-23-1 and FM 4-20.12[10-67-1].)
 - Are the required number of first aid kits and fire extinguishers available in each aircraft? (Refer to AR 95-1, CTA 8-100, and TM 1-1500-328-23.)
 - Are aircraft -10 and -10CL manuals in the binder? (Refer to AR 95-1 and DA Pam 738-751.)
- Petroleum, oil, and lubricants.
 - Are fuel servicing procedures followed? (Refer to FM 4-20.12[10-67-1] and FM 3-04.111[1-111] Appendix J.)
 - Is fuel in aircraft tanks checked for water and other contaminants before the first flight of each working day? Is the fuel in the refueler sampled and tested for water daily? (Refer to FM 4-20.12[10-67-1].)

- Are aircraft tie-down anchors free of debris when used as refueling, servicing, or grounding points? (Refer to FM 4-20.12[10-67-1].)
- Are fuel servicing points and equipment properly maintained and regularly inspected? (Refer to FM 4-20.12[10-67-1].)
- Are ground rods installed at each refueling point? Were the grounding points tested for electrical resistance when installed and retested if mechanical damage occurred? (Refer to TM 1-1500-204-23-1.)
- Are grounding points marked according to FM 4-20.12(10-67-1) and logs maintained to show identification of each rod, date tested, and electrical resistance in ohms? (Refer to FM 4-20.12[10-67-1].)
- Are refueling vehicles marked with the appropriate fuel grade? (Refer to FM 4-20.12[10-67-1], and TB 43-0209.)
- Do vehicles have chocks on board? Are they used during refueling? (Refer to FM 4-20.12[10-67-1].)
- Are fire extinguishers mounted on vehicle dispensing units? (Refer to FM 4-20.12[10-67-1].)
- Are petroleum products stored according to existing command policies?
- Are personnel prohibited from carrying lighters or matches within 50 feet of a refueling aircraft?
- Are refueling personnel wearing protective clothing? (Refer to FM 4-20.12[10-67-1].)
- Quality control shop.
 - Are aircraft maintenance publications up to date? (Refer to DA Pams 25-30 and 25-40.)
 - Do aircraft maintenance areas have sufficient quantities of manuals for assigned work? (Refer to FM 3-04.500[1-500].)
 - Are the appropriate publications used when working on aircraft? (Refer to FM 3-04.500[1-500].)
 - Are DA Form 12-series available and updated? Do QC personnel know what publications they are to receive? (Refer to DA Pam 25-33 and the DA Form 12-series.)
 - Are red-X conditions properly signed off in sequence by TI? (Refer to DA Pams 738-751 and 600-8.)
 - Does the unit maintain a SOF TWX file? Is it separated by aircraft mission, type, design, and series? (Refer to AR 25-400-2.)
 - Are there procedures for QC and maintenance personnel to familiarize themselves with publications? Is there a technical data familiarization chart?
 - Do QC personnel conduct in-progress inspections of products to assure reliability of the completed assembly? (Refer to FM 3-04.500[1-500].)

- Does the unit actively participate in the submission of recommended changes to publications and deficiency reports? (Use DA Form 2028 and DD Form 173/1.)
 - Is SF 368 (Product Quality Deficiency Report) submitted for each preliminary report of aircraft mishap for materiel failure or malfunction? (Refer to DA Pam 738-751.)
 - Are aircraft maintenance and flight forms and records properly completed and filed? (Refer to DA Pam 738-751.)
 - Are all assigned aircraft involved in the AOAP? Is the program properly followed? Are crew and maintenance personnel familiar with oil sampling procedures? Are records maintained? (Refer to AR 750-43 and TB 43-0106.)
 - Are aircraft inspected according to established aircraft maintenance procedures? Are they not being flown beyond the required inspection intervals? (Refer to TM 1-1500-328-23.)
 - Are test flight check sheets attached to DA Form 2408-13-1 for all test flights and the MTF recorded on DA Form 2408-13-1? (Refer to TM 1-1500-328-23.)
 - Is the equipment calibrated in the specified time interval and properly stored? (Refer to TB 43-180.)
 - Are calibration records maintained? (Refer to TB 750-25.)
 - Are turbine engine analysis checks and health indicator test baselines performed, and are they recorded on DA Forms 2408-13, 2408-13-1, 2408-19-1, 2408-19-2, and charts? (Refer to DA Pam 738-751, applicable -23 TMs, and applicable -24 engine TM.)
 - Was an inventory completed after initial receipt of the aircraft or every 12 months that the unit possessed the aircraft? (Use DA Form 2408-17 and DA Pam 738-751.)
 - Is the safety inspection and testing of lifting devices monitored? Are forms and records maintained? (Refer to TB 43-0142.)
- Maintenance shop.
 - Does the shop foreman emphasize accident prevention measures and check for marking and width of personnel safety aisles, safety and warning posters, and smoking and nonsmoking areas? (Refer to TM 1-1500-204-23-1, FM 3-04.500[1-500], and DA Pam 385-1.)
 - Is all stationary and portable shop electrical equipment properly grounded? (Refer to TM 1-1500-204-23-1 and National Electrical Codes.)
 - Is there a program in effect to encourage reporting of hazards, near accidents, unsafe shop practices, and so forth? (Refer to ARs 95-1, 385-95, and 385-40.)
 - Are equipment and vehicle operators thoroughly familiar with the equipment's operation, handling, care, and preventive

maintenance? (Example: Do operators have permits? [Refer to AR 600-55.]. Is the maintenance manual in proximity to equipment? [Refer to FM 3-04.500[1-500].]. Is equipment or vehicle maintained according to organizational and operator's manuals?)

- When parts or items are removed from aircraft, are they marked and stored to be plainly seen? (Refer to FM 04.500[1-500].)
- Are proper safety procedures practiced to prevent FOD when maintenance is performed on turbine engines?
- Are run-up and exhaust areas policed? Are containers available for trash and loose objects? Are loose hardware and other foreign objects removed? (Refer to TM 1-1500-204-23 series.)
- Are grounding cables provided for aircraft in hangars? Are they used? Has an initial electrical resistance test been performed and recorded on grounding points? (Refer to National Fire Codes, TM 1-1500-204-23 series, and FM 4-20.12[10-67-1].)
- Are grounding safety wires visible? Are they bright yellow?
- Is adequate lighting provided for maintenance shops and hangars?
- Are parts removed from aircraft immediately written up on appropriate forms? (Refer to DA Pam 738-751.)
- Are required numbers and types of fire extinguishers available? Are aircraft and ground fire extinguishers checked as required? Are shop personnel trained to use fire-fighting equipment? (Refer to TM 1-1500-204-23 series and FM 04.500[1-500].)
- Are trained specialists available to maintain special equipment such as ejection seat, armament, and so forth, when installed in unit aircraft? (Refer to AR 95-1 and FM 3-04.500[1-500].)
- Are shops clean and floors grease-free? (Refer to FM 3-04.500[1-500].)
- Do personnel using power tools (for example, drills, grinders, lathes, torches, and so forth) wear safety goggles and noise-attenuating devices as required? Do repairers remove jewelry while performing maintenance? (Refer to TM 1-1500-204-23 series and ARs 40-5 and 385-10.)
- Are hoisting instructions for lifting aircraft components or aircraft followed? Are cranes, hoists, cables, slings, and forklift trucks inspected, weight-tested, and stenciled with the load rating? (Refer to TB 43-0142.)
- Are aircraft on jacks labeled and is access to them restricted? Are aircraft jacks marked with the maximum lifting capacity? (Refer to TM 1-1500-204-23 series, OSHA Standard 1910.244, and FM 3-04.500[1-500].)
- Do personnel in the instrument shop know the procedures for cleaning up mercury spills? (Refer to TB 385-4.)

- Are oily rags stored in closed metal containers? Are containers properly labeled? (Refer to TM 1-1500-204-23 series and FM 3-04.500[1-500].)
- Are hydraulic, fuel, and oil lines protected from dirt while disconnected? (Refer to TM 1-1500-204-23 series.)
- Are all ammunition and pyrotechnics removed from aircraft before maintenance and before putting aircraft in hangars? (Refer to TM 1-1500-204-23 series.)
- Are engine, hydraulic, propeller and rotor, technical supply, and other work areas clean and well arranged? (Refer to TM 1-1500-204-23 series and FM 3-04.500[1-500].)
- Are oxygen gaseous storage areas properly marked? Are oxygen gaseous cylinders stored in a separate building (area) from aircraft servicing and maintenance areas? Are empty and full cylinders stored separately? (Refer to TM 1-1500-204-23 series and National Fire Codes, Standard 410B.)
- Are sample bottles available to check fuel contamination in aircraft fuel tanks during preflight? (Refer to FM 4-20.12[10-67-1].)
- Are proper containers used and stored? Are containers clean and adequate? Are samples properly discarded? Is a fire point nearby? Are complete daily inspections conducted? (Use PMD/PMS cards and DA Form 2408-13 and 13-1.)
- Are tops of booths, shelves, and other surfaces in the paint shop clean to prevent lint accumulation? Are dope or paint deposits removed from the floor? Are there no more paint and dope stored in the paint shop than will be used during the work shift? Are there fire blankets at strategic points and the required number (and correct type) of fire extinguishers provided throughout the paint shop? Is electrical equipment in the paint shop explosion-proof? Are smoking restrictions enforced? (Refer to TM 1-1500-204-23 series.)
- Are unsealed hydraulic fluid containers considered contaminated and destroyed? (Refer to TM 1-1500-204-23 series.)
- Are the assigned aircraft marked and painted to include warnings? (Refer to TM 55-1500-345-23.)
- Are necessary accident prevention signs posted in the shop area? (Refer to TM 1-1500-204-23 series.)
- Are aircraft parked in hangars? Are aircraft batteries disconnected? Are static ground cables attached? Are drip pans placed beneath aircraft?
- Does gasoline-powered equipment (tugs, APUs, and so forth) parked in hangars overnight have full fuel tanks?
- Battery maintenance shop.
 - Is eyewash located within 25 feet of work area? Is eyewash easily accessible? (Refer to TB 385-4 or ANZI Z35811)

- Is shower located within 25 feet of work area? (Refer to TB 385-4 or ANZI Z35811)
- Is the correct type of fire extinguisher located in work area? (Refer to TB 385-4 or ANZI Z35811)
- Is protective equipment provided in each tool kit (TK-90/6)?
- Does the safety board have the required items posted in shop? (Refer to TB 385-4 or ANZI Z35811)
- Is the battery tested for proper filler-cap operation? (Refer to TM 11-6140-203-23.)
- Are battery maintenance personnel thoroughly trained in charging, discharging, and testing procedures? (Refer to TM 11-6140-203-14-1 and TB 385-4.)
- Are smoking, open flames, or sparks prohibited in the battery-charging area? Is the area marked NO SMOKING? Are arc-proof electrical switches installed?
- Is the battery-charging area adequately ventilated to prevent accumulation of explosive gases? (Refer to TM 11-6140-203-14-1.)
- Are facilities provided for flushing and neutralizing spilled electrolyte? (Refer to TM 11-6140-203-14-1.)
- Are tools and other conductive materials stored so as not to fall on batteries and cause a short circuit or hydrogen ignition? Do shop personnel remove all jewelry while working with batteries? Do shop personnel wear protective clothing? (Refer to TB 385-4.)
- Is battery inspected, cleaned, and repaired before charging? (Refer to TM 11-6140-213-14-1.)
- Is charging equipment energized after the battery is connected to the circuit? (Refer to TM 11-6140-203-14-1.)
- Is water or electrolyte added to the battery only when fully charged and stabilized for at least 30 minutes? (Refer to TM 11-6140-203-14-1.)
- Are racks and trays substantial and resistance-treated to the electrolyte? (Refer to TB 385-4.)
- Are shop floors made of acid-resistant construction or protected from acid accumulations? (Refer to TB 385-4.)
- Are unsealable batteries arranged in well-ventilated rooms or in enclosures that have outside vents? (Refer to TM 11-6140-203-14-1.)
- Are lead-acid and nickel-cadmium batteries stored separately? Are acids stored properly? Is separate equipment used to maintain each battery? (Refer to TM 11-6140-203-14-1.)
- Does the shop have a SOP? (Refer to TB 385-4.)
- Have battery maintenance personnel received formal training (MOS 68F) in the care of nickel-cadmium batteries?

- Is battery cleaned, dried, and wiped free of white deposits (potassium carbonate) every 25 flight hours or weekly?
- Is battery checked to ensure that excessive corrosion and spewing do not occur? Is battery case dry?
- Is battery checked for damage, loose and missing filler caps, and hardware?
- Are there cracks or leakage on top of the battery cells?
- Are cables damaged or frayed?
- Is a battery leakage check performed on batteries returned to direct support if leakage is more than 1 milliampere per amp hour between the battery terminal and ground?
- Do qualified personnel check aircraft voltage regulators? Are voltage regulators adjusted according to the appropriate maintenance manual?
- Is the flowchart in Chapter 2 of TM 11-6140-203-14-1 followed during AVIM maintenance?
- Is the nickel-cadmium maintenance shop used only for nickel-cadmium batteries, that is, no acid electrolytes? (Refer to TM 11-6140-203-14-1.)
- Are cell shorting straps available? Are they used to discharge cells to zero volts? (Refer to TM 11-6140-203-23.)
- Are battery vents loosened slightly but left in place during battery charging? Are vent caps pressure-cleaned and tested at 2-10 psi during the 120-day or 100-hour maintenance inspection? Are battery box vent tubes checked and cleaned when the battery box is reinstalled? (Refer to TM 11-6140-203-23.)
- Do maintenance personnel monitor the voltage of individual cells at regular intervals during charge and discharge cycles? Are cell voltages checked when a battery is received from the field (for shorted cells) and at the beginning of charge for high voltage (for low electrolyte cells)? (Refer to TM 11-6140-203-23.)
- Is an electrolyte-level checking device available? Is battery electrolyte level checked only when fully charged and after having stabilized for 30 minutes to 2 hours (except the BB-641-A and BB-676-A, which should be checked within 30 minutes of charge completion)? (Refer to TM 11-6140-203-23.)
- Are the discharge times strictly followed during the battery capacity test? (Refer to TM 11-6140-203-23.)
- Do maintenance personnel understand that cells from different manufacturers cannot be mixed in the same battery? (Refer to TM 11-6140-203-23.)
- Are tool kit (TK-90), charger/analyzer or charger with load bank (AN/ASM-137 or AN/ASM-137A), test equipment (TS-352R/U), and required technical literature available? (Refer to TM 11-6140-203-23.)

- Avionics shop.
 - Does the unit have a training program that provides personnel with information concerning safety practices? (Refer to AR 385-10 and DA Pam 385-1.)
 - Are necessary technical publications and regulations on hand? Are the latest changes posted? (Refer to DA Pams 25-30 and 25-40.)
 - Are maintenance forms and records properly maintained? (Refer to DA Pam 738-751.)
 - Are calibration requirements of test equipment up-to-date? (Refer to TBs 43-180 and 750-25.)
 - Are binding posts insulated, covered, and clearly marked with voltage and current values? (Refer to TM 1-1500-204-23 series.)
 - Are test equipment and aircraft systems properly used? (Refer to TM 11-4000.)
 - Are technical inspections for repaired equipment accomplished?
 - Are workbenches wired according to the national electrical code?
 - Are rubber floor mats or similar insulating materials provided in front of repair positions? (Refer to TM 11-4000 and TB 385-4.)
 - Are all power attachment plugs and connectors constructed so that there are no exposed current-carrying parts except the prongs? (Refer to National Electrical Code, ART 410-52[d].)
 - Are hazardous power sources (other than 110-volt convenience outlets) appropriately color-coded? (Refer to TM 1-1500-204-23 series.)
 - Is all test equipment properly grounded? (Refer to TM 1-1500-204-23 series; National Electrical Code, ART 250-45[d]; and TB 385-4.)
 - Are all physical hazards identified and appropriately color-coded? (Refer to TM 1-1500-204-23 series.)
 - Are compass systems properly calibrated? (Refer to TMs 11-4920-292-15 and 1-1500-204-23 series.)
 - Is the avionics equipment in the aircraft properly safety-wired? (Refer to TM 55-1500-323-24, Section 16.)
 - Are the necessary accident prevention signs posted in the shop area? (Refer to TM 1-1500-204-23 series.)
- Armament shop.
 - Are aircraft pyrotechnics (flares and signals) removed from the aircraft when not required? (Refer to TMs 9-1370-203-20, 9-1370-203-34, and 9-1370-206-10.)
 - Are ground safety pins inserted in the ejector racks after the helicopter is shut down after each flight? (Refer to applicable aircraft -23 series TM.)
 - Are jettison cartridges removed from the pylon stores ejection device before maintenance or storage of the aircraft? (Refer to applicable aircraft -23 series TM.)

- Are jettison cartridges marked on the cartridge base each time the cartridge is removed from the ejection rack? (Refer to applicable aircraft –23 series TM.)
- Are weapon record data forms maintained? (Refer to DA Pam 738-751.)
- Do personnel performing ground crew operations, servicing and maintenance on weapon subsystems, especially in the areas of loading, unloading, and operational checks, observe safety precautions (Example: Ensure that aircraft is positioned so that weapons are aimed into clear or riveted areas? Understand and comply with arming procedures for assigned weapon subsystems and use of hand signals according to FM 3-25.60(21-60)? Understand and comply with routine and emergency or unsafe disarming procedures?)
- Technical supply shop.
 - Are all items issued on a first-in, first-out basis?
 - Are assigned shelf lives exceeded?
 - Are unserviceable and repairable parts turned in on time?
 - Is the required paperwork turned in with parts?
 - Are unserviceable and repairable parts inspected by the TI before turn-in?
 - Is the materiel condition tag signed?
 - Are excess reusable containers turned in?
- Ground support equipment.
 - Is a deficiency report submitted if deficiencies are noted during a reinspection of new or repaired equipment that was inspected and classified serviceable? (Refer to TM 1-1500-204-23 series.)
 - Besides special inspections, are regular periodic inspections performed? (Refer to TM 1-1500-204-23 series.)
 - Is equipment free of mud and other debris? Is equipment receiving proper lubrication? Are seals that show definite leakage replaced? (Refer to TM 1-1500-204-23 series.)
 - For equipment with batteries, are battery terminals and posts tight, clean, and corrosion-free? (Refer to TM 1-1500-204-23 series.)
 - Are ignition systems clean, wiring correct, and coils and condensers operating properly? (Refer to TM 1-1500-204-23 series.)
 - Does ground support equipment meet performance and safety requirements? (Refer to TM 1-1500-204-23 series.)
 - If the ground support equipment is in storage, is there a prescribed interval of inspection? (Refer to TM 1-1500-204-23 series.)
 - Is the ground support equipment used on landing strips, taxiways, and other tight areas painted and reflectorized? (Refer to AR 58-1, FM 3-04.500[1-500], and TM 1-1500-204-23 series.)

- Are markings maintained on the ground support equipment? (Refer to TM 1-1500-204-23 series.)
- Is the proper polarity marked on all male and female electrical receptacles of APUs and aircraft? (Refer to TM 1-1500-204-23 series.)
- If the two-wheel type of APU is used, are appropriate inspections completed at the end of the day or at the completion of 8-hour operations? (Refer to TM 1-1500-204-23 series.)
- Are required inspections of the three-wheel APU accomplished? (Refer to TM 1-1500-204-23 series.)
- Are maintenance workstand adjustable height and fixed height stenciled with the load rating? (Refer to TB 43-0142.)
- Are major welds sound? Are handrails and steps cracked or worn? Are flexible hoses, fittings, and tube assemblies damaged or leaking? (Refer to TM 1-1500-204-23 series.)
- Are precautions taken to protect electrically and gasoline-driven air compressors from severe weather and extreme temperatures? (Refer to TM 1-1500-204-23 series.)
- Do compressors have belt and flywheel guards installed? (Refer to TM 1-1500-204-23 series.)
- Are air compressors inspected daily? Are they drained at least twice daily if they are operated in extreme moist conditions? (Refer to TM 1-1500-204-23 series.)
- Is a hydrostatic test completed annually on air compressors? Is the tank stenciled with the date the test was completed? (Refer to TB 43-0151.)
- Are periodic inspections of 10- and 100-hour intervals accomplished on compressor and carrying case assemblies? (Refer to TM 1-1500-204-23 series.)
- Is the high-pressure air pump in proper operating condition? (Refer to TM 1-1500-204-23 series.)
- Are aircraft jacks stenciled with the maximum lifting capacity? (Refer to TB 43-0142 and TM 1-1500-204-23 series.)
- Are the jacks periodically disassembled, cleaned, inspected, and reassembled when replacing defective rubber packings? (Refer to TM 1-1500-204-23 series.)
- Are daily inspections performed if engine- or motor-driven hydraulic test stands are used daily? (Refer to TM 1-1500-204-23 series.)
- Is preventive maintenance performed on the hydraulic test stands? (Refer to TM 1-1500-204-23 series.)
- Do grease guns have the type of lubricant identified? Are identification tags protected from deterioration and obliteration by grease? Are they securely attached to the grease gun? (Refer to TM 1-1500-204-23 series.)

- Is the electrical wiring insulation on the portable lighting equipment defective or frayed? (Refer to TM 1-1500-204-23 series.)
- Hand tools and equipment.
 - Are racks, shelves, or toolboxes provided for tools not in use?
 - Are precautions taken to prevent tools from dropping or falling from ladders, scaffolds, platforms, or other elevations?
 - Are tools frequently inspected by responsible personnel? Are defective tools turned in for repair or salvage?
 - Are tools with sharp cutting edges carried in protective covers?
 - Are power tools equipped with guards? Are electrical contacts enclosed? Is wiring well insulated and grounded?
 - Are exposed sharp edges smoothed down when work is completed?
 - Are ladders used rather than improvised ladders, such as packing cases or barrels?
 - Are parts and items removed from the aircraft stowed out of the way or marked so they are visible day or night?
 - Are tools stored so that sharp edges do not protrude?
 - Are electrical tools used inside the aircraft?
 - Are nuts and bolts torqued as specified in the appropriate TM?
 - Are items stored in the tool crib cleaned and lubricated to prevent rust? Are they within the calibration due date if calibration is required? (Refer to TB 43-180.)
 - Are grease guns labeled with contents?
- Welding equipment.
 - During welding or cutting operations, is caution observed to prevent sparks from starting fires? Is a fire extinguisher available?
 - Are safety goggles provided for operators using oxyacetylene equipment?
 - During electric welding operations, is the operator wearing a face shield or helmet with shaded falter glass, protective sleeves, gloves, and apron? Are welding operations screened off when other personnel are in the vicinity?
- General housekeeping.
 - Are covered, fire-resistant rubbish cans used in work areas?
 - Are self-closing covered metal waste cans conveniently located to dispose of oil rags and waste?
 - Are volatile flammable liquids used for washing or cleaning parts? Are they stored in open containers? Are working quantities of such liquids confined to approved containers?
 - Is dripping or spilling of oil prevented? Are drip pans or other suitable means provided to collect excess oil?

- Are conspicuously marked fire extinguishers of the appropriate type provided in armament, maintenance, and training areas?
- Are all fire extinguishers properly charged, periodically tested, and ready for instant use?
- Are all unit personnel trained to use fire extinguishers?